

# 2019 – 2020 College Catalog



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# Welcome to Central Piedmont Community College

Central Piedmont Community College is an exceptional institution that is recognized nationally for its commitment to student success, workforce development, and innovative practices. In 1963, Central Piedmont Community College was established as one of the first of the 58 colleges in the NC Community College System. At that time, the college had 23 degree and diploma programs. Today, there are more than 300 degree, diploma, and certificate programs; a comprehensive literacy program, and an extensive variety of corporate and continuing education offerings which are offered at nine locations and through online courses. The catalog is a comprehensive inventory of the information and resources you may need to achieve personal, professional, academic, or career goals at Central Piedmont.

Central Piedmont is a national leader in workforce development and maintains its mission of remaining academically, geographically, and financially accessible so that it can better serve our students.

All the best,

Kandi W. Deitemeyer, Ed. D.,  
President



Kandi W. Deitemeyer, Ed. D.,  
President



# About





# About Central Piedmont



As a champion of students, a catalyst for opportunity, and an exceptional provider of learning experiences, Central Piedmont has transformed lives and strengthened the Charlotte Mecklenburg community. Central Piedmont offers academic programs at six locations throughout Mecklenburg County as well as online. With more than 300 degree, diploma, and certification programs; customized corporate training; market-focused continuing education courses; and special interest classes, Central Piedmont serves thousands of Mecklenburg County residents each year as a vital partner to business, government and educational agencies.

## Academic Calendar

- The Academic Calendar is subject to change. For the most current version, view the online Academic Calendar from the home page of the college website.
- Advisement week and registration dates for each term are announced on the Admissions, Registration & Records website.
- Corporate and Continuing Education registration is ongoing throughout every term through Customer Service and Registration for Corporate and Continuing Education at 704.330.4223.
- Central Piedmont is closed on the holidays listed below.
- For additional information, contact the Central Piedmont Information Call Center at 704.330.2722.

### Spring Semester 2019

Classes Begin	Thursday, Jan. 10
First Short Session	Thursday, Jan. 10 - Friday, March 8
Martin Luther King, Jr. Holiday	Monday, Jan. 21
Spring Break (CPCC Open)	Monday, March 11 - Sunday, March 17
Second Short Session	Monday, March 18 - Saturday, May 11
Spring Holidays	Friday, April 19 - Sunday, April 21
Semester Ends	Saturday, May 11
Final Exam Period	Monday, May 6 - Saturday, May 11
Graduation	Thursday, May 16

### Summer Term 2019 (8 weeks)

Classes Begin	Monday, May 20
Memorial Day Holiday	Monday, May 27
Independence Day Holiday	Thursday, July 4
Term Ends	Tuesday, July 16

### Fall Semester 2019

Classes Begin	Thursday, Aug. 15
First Short Session	Wednesday, Aug. 15 - Friday, Oct. 11
Labor Day Holiday	Monday, Sept. 2
Fall Break	Monday, Oct. 14 - Tuesday, Oct. 15
Second Short Session	Wednesday, Oct. 16 - Wednesday, Dec. 11
Thanksgiving Holiday	Thursday, Nov. 28 - Sunday, Dec. 1
Final Exam Period	Thursday, Dec. 5 - Wednesday, Dec. 11
Semester Ends	Wednesday, Dec. 11
Winter Holidays	Thursday, Dec. 12 - Sunday, Jan. 12

### Spring Semester 2020

Classes Begin	Monday, Jan. 13
First Short Session	Monday, Jan. 13 - Friday, March 6
Martin Luther King, Jr. Holiday	Monday, Jan. 20
Spring Break (CPCC Open)	Monday, March 9 - Sunday, March 15
Second Short Session	Monday, March 16 - Tuesday, May 12
Spring Holidays	Friday, April 10 - Sunday, April 12
Semester Ends	Tuesday, May 12
Final Exam Period	Wednesday, May 6-12
Graduation	Thursday, May 14

### Summer Term 2020 (8 weeks)

Classes Begin	Wednesday, May 20
Memorial Day Holiday	Monday, May 25
Independence Day Holiday	Friday, July 3
Terms Ends	Thursday, July 16

## Accreditations / NCCCS Performance Measures

### Accreditations

Central Piedmont is accredited by the Southern Association of Colleges and Schools Commission on Colleges to award associate degrees, diplomas, and certificates. Contact the Commission on Colleges at 1866 Southern Lane, Decatur, Georgia 30033-4097 or call 404.679.4500 or see sacscoc.org for questions about the accreditation of Central Piedmont. The Commission on Colleges should be contacted only for questions relating to the College's accreditation. Inquiries regarding the programs and services of Central Piedmont should be directed to the College.

The College also is accredited and approved by the following organizations:

**Accreditation Commission for Education in Nursing (ACEN);**  
acenursing.org

- Christa A. Overcash Associate Degree Nursing Program

**Accreditation Council for Occupational Therapy Education (ACOTE) of the American Occupational Therapy Association (AOTA),** 4720 Montgomery Lane, Suite 200, Bethesda, MD 20814-03449; 301.652.AOTA

- Occupational Therapy Assistant

**American Bar Association**

- William K. Diehl Jr. Paralegal Technology Program

**American Culinary Federation Foundation Accrediting Commission**

- Culinary Arts
- Baking and Pastry Arts

**American Heart Association**

- Cardiopulmonary Resuscitation
- Advanced Cardiac Life Support
- Pediatric Advanced Life Support

**American Society of Health-System Pharmacists (ASHP)** 7272 Wisconsin Ave., Bethesda, MD, 20814; ashp.org

- Pharmacy Technology

**American Welding Society** – Accredited Welder Test Facility

**Association of Nutrition & Foodservice Professionals (ANFP);** anfonline; 800.323.1908

- Certified Dietary Managers (CDM)
- Certified Food Protection Professionals (CFPP)
- CFP® Board of Standards, Inc.

**Commission on Accreditation for Health Informatics and Information Management Education (CAHIIM);** cahiim.org

- Health Information Technology

**Commission on Accreditation for Respiratory Care (CoARC),** 1248 Harwood Rd., Bedford, TX 76021; coarc.com; 817.283.2835

- Respiratory Therapy

**Commission on Accreditation in Physical Therapy Education (CAPTE) of the American Physical Therapy Association (APTA),** The Commission on Accreditation in Physical Therapy Education, Department of Accreditation, APTA, 1111 North Fairfax Street, Alexandria, VA 22314; capteonline.org; 703.706.3245

- Physical Therapist Assistant

**Commission on Accreditation of Allied Health Education Programs (CAAHEP)** upon the recommendation of the Accreditation Review Committee on Surgical Technology and Surgical Assisting (ARC/STSA), ARC/STSA, 6 W. Dry Creek Circle, Suite #110, Littleton, CO 80120; caahep.org; 303.694.9262

- Surgical Technology

**Commission on Accreditation of Allied Health Education Programs (CAAHEP)** upon the recommendation of the Cytotechnology Programs Review Committee (CPRC) of the American Society of Cytopathology (ASC), 1361 Park Street, Clearwater, FL 33756; caahep.org; 727.210.2350

- Cytotechnology

**Commission on Accreditation of Allied Health Education Programs (CAAHEP)** upon the recommendation of the Joint Review Committee on Education in Cardiovascular Technology (JRC-CVT) at the associate degree level in the Non-Invasive Cardiology (Adult Echocardiography) concentration and the Invasive Cardiology (Invasive Cardiovascular Technology) concentration; The Commission on Accreditation of Allied Health Education Programs (CAAHEP), 25400 US Highway 19 North, Suite 158, Clearwater, FL 33763; caahep.org; 727.210.2350

- Non-Invasive Cardiology (Adult Echocardiography)
- Invasive Cardiology (Invasive Cardiovascular Technology)

**Commission on Accreditation of Allied Health Education Programs (CAAHEP)** upon the recommendation of the Medical Assisting Education Review Board (MAERB). Commission on Accreditation of Allied Health Education Programs, 1361 Park Street, Clearwater, FL 33756; caahep.org; 727.210.2350

- Medical Assisting

**Commission on Dental Accreditation (CODA)**

- Dental Hygiene
- Dental Assisting

**Commission on Allied Health for Ophthalmic Medical Personnel (COAOMP)**

- Ophthalmic Medical Assisting

**Committee on Accreditation of Educational Programs for the Emergency Medical Services Professions (COAEMSP)**

- Emergency Medical Services

**Commission on Accreditation for American Health Informatics and Information Management Education (CAHIIM);** cahiim.org

- Health Information Technology

**Council for Standards in Human Service Education,** cshse.org

- Human Services Technology

**North Carolina State Board of Cosmetic Arts,** 1207 Front Street, Suite 110, Raleigh, North Carolina, 27609

- Licensed Cosmetology Program
- Cosmetology Program, Pivot Point International Academy

**Engineering Technology Accreditation Commission of ABET,** abet.org

- Civil Engineering Technology
- Computer Engineering Technology
- Electrical Engineering Technology

- Electronics Engineering Technology
- Mechanical Engineering Technology

**National Accrediting Agency for Clinical Laboratory Sciences (NAACLS)**, 5600 N. River Rd., Suite 720, Rosemont, IL 60018-5119; naacils.org; 847.939.3597/ 773.714.8880

- Medical Laboratory Technology

#### **National Association for the Education of Young Children**

- Early Childhood Education Associate Degree Program

#### **National Automotive Technician Education Foundation**

- Automotive Technology Program
- BMW-Associate Degree Program
- General Motors Automotive Service Educational Program
- Honda Professional Automotive Career Training

**National Center for Construction Education and Research** Accredited Training and Education Facility

#### **National Coalition of Certification Centers (NC3)**

- Air Conditioning, Heating and Refrigeration
- Transportation Systems Technology

#### **National Institute for Metalworking Skills**

- Computer Integrated Machining

#### **Nationwide Mortgage Licensing System**

#### **North American Board of Certified Energy Practitioners**

#### **North Carolina Appraisal Board**

#### **North Carolina Bar Certified**

- William K. Diehl, Jr. Paralegal Technology Program

#### **North Carolina Commissioner of Banks**

#### **North Carolina Criminal Justice Education and Training Standards Commission**

- Basic Law Enforcement Training Technology
- Criminal Justice Technology
- General Instructor Training
- Lidar Certification/Recertification
- Radar Certification/Recertification
- Time/Distance Certification/Recertification

**North Carolina Department of Health and Human Services**, Division of Health Service Regulation, Center for Aide Regulation and Education (CARE)

- Nurse Aide

#### **North Carolina Department of Insurance**

#### **North Carolina Fire and Rescue Commission**

- Firefighter Training

#### **North Carolina Office of Emergency Medical Services (NCOEMS)**

- Emergency Medical Technician
- Paramedic

#### **North Carolina Real Estate Commission**

#### **North Carolina Board of Nursing**

- Christa A. Overcash Associate Degree Nursing Program

## **North Carolina Community College System Performance Measures**

### **Performance Measures for 2018-2019 (based on 2017-2018 data)**

The North Carolina Community College System (NCCCS) establishes performance measures for the 58 community colleges in North Carolina. System Excellence and System Baseline benchmarks are set for each measure. The seven measures are as follows:

#### **1. Basic Skills Student Progress, 2017-2018**

**PURPOSE:** To ensure adult students with low literacy skills are progressing academically toward basic skill attainment necessary for employment and self-sufficiency.

**PERFORMANCE MEASURE:** The percentage of periods of participation (POP) with a measurable skill gain (MSG) in Basic Skills studies.

**BENCHMARKS:** System Excellence = 50.6% / System Baseline = 24.2%

**Central Piedmont Measurable Skill Gain = 33.8%**

#### **2. Student Success Rate in College-Level English Courses, Fall 2015 Cohort**

**PURPOSE:** To ensure students are successfully completing credit-bearing English courses within their first three academic years.

**PERFORMANCE MEASURE:** The percentage of first-time associate degree and transfer pathway students in Fall 2015 who earned at least a grade of "C" in college credit English courses within three years.

**BENCHMARKS:** System Excellence = 66.6% / System Baseline = 40.1%

**Central Piedmont Success Rate = 68.9%**

#### **3. Student Success Rate in College-Level Math Courses, Fall 2015 Cohort**

**PURPOSE:** To ensure students are successfully completing credit-bearing Math courses within their first three academic years.

**PERFORMANCE MEASURE:** The percentage of first-time, fall 2015 associate degree seeking and transfer pathway students passing college credit Math courses with at least a grade of "C" within three years.

**BENCHMARKS:** System Excellence = 46.2% / System Baseline = 19.5%

**Central Piedmont Success rate = 46.7%**

#### **4. First Year Progression, Fall 2017**

**PURPOSE:** To ensure first-year students reach an academic momentum point that helps predict their future completion of credentials.



PERFORMANCE MEASURE: The percentage of first-time, fall 2017, credential-seeking curriculum students who either graduated prior to, or enrolled in post secondary education the next fall semester.  
 BENCHMARKS: System Excellence = 71.9% / System Baseline = 56.6%.

**Central Piedmont Progression Rate = 65.0%**

### 5. Curriculum Completion, Fall 2014 Cohort

PURPOSE: To ensure student completion and/or persistence toward a post-secondary credential.

PERFORMANCE MEASURE: The percentage of first-time, fall 2014, credential-seeking curriculum students who graduated, transferred or were still enrolled during the fourth academic year and successfully completed at least 42 credit hours.

BENCHMARKS: System Excellence = 52.7% / System Baseline = 35.1%

**Central Piedmont Completion Rate = 44.8%**

### 6. Licensure and Certification Passing Rate, 2017-2018

PURPOSE: To ensure programmatic coursework prepares students to competently practice in their chosen profession.

PERFORMANCE MEASURE: The weighted index score of first-time test-taker results on licensure and certification exams. Exams included in this measure are state-mandated exams, which candidates must pass before becoming active practitioners. Weights are based on the tier associated with the related instructional program.

BENCHMARKS: System Excellence = 1.07 / System Baseline = 0.79W

**Central Piedmont Weighted Index Score = 1.09**

Basic Law Enforcement Training

Building Inspector

Cosmetology

Dental Hygiene

Electrical Inspector

Emergency Medical Technician - Basic

Emergency Medical Technician - Paramedic

Mechanical Inspector

Nurse Aide

Occupational Therapy Assistant

Physical Therapy Assistant

Plumbing Inspector

Real Estate Sales

Registered Nursing

### 7. College Transfer Performance, 2016-2017 Community College Students

PURPOSE: To ensure the academic success of community college students who transfer to a four-year college or university.

PERFORMANCE MEASURE: The percentage of students who completed associate degrees, or at least 30 cumulative credit hours, during the 2016-2017 academic year and either graduated prior to, or were enrolled in four-year institutions the next fall semester.

BENCHMARKS: System Excellence = 89.4% / System Baseline = 74.4%

**Central Piedmont Transfer Performance Rate= 86.6%**

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## Broadcasting Service of Central Piedmont

### WTVI PBS Charlotte



WTVI PBS Charlotte presents the best in news, drama, performance, ideas and culture to viewers across a 13-county service area in North and South Carolina. A viewer-supported service of Central Piedmont, PBS Charlotte reaches 1.2 million households and offers high-quality, noncommercial programs that educate, inspire and entertain.

The station's broadcasts include award-winning children's programming, ground-breaking documentaries and original performances as well as in-depth field reporting of local issues. This commitment to local coverage sets PBS Charlotte apart from other public broadcasting stations in the area.

PBS Charlotte is committed to serving the community and as outreach for the station's licensee, Central Piedmont. For additional information about the station, visit [PBSCharlotte.org](http://PBSCharlotte.org) or access the station's Facebook page at [facebook.com/wtvicharlotte](https://facebook.com/wtvicharlotte).

### Local Programs

In addition to producing documentaries and specials, PBS Charlotte produces five regular programs:

- "Carolina Impact" explores the issues, people and places that impact the region (Tuesday at 8 p.m. & 11 p.m., Thursday and Saturday at 5:30 p.m., Sunday at 11:30 a.m.).
- "Trail of History" showcases historic figures and events that have influenced the Charlotte region (Tuesday at 8:30 p.m. & 11:30 p.m., Saturday at 5 p.m.).
- "Off The Record" talks about the latest news of the week. (Friday at 8:00 p.m., Sunday at noon)
- "Charlotte Cooks" teaches viewers how to expand their culinary talents (Tuesday at 5:30 p.m.).
- "Carolina Business Review" focuses on business and industry in the Carolinas (Friday at 8:30 p.m., Sunday at 12:30 p.m.).

A complete listing of PBS Charlotte's local and national programming is available under at [PBSCharlotte.org](http://PBSCharlotte.org) under Schedule.

### 3-D Project (Dreamers•Doers•Destiny)

In an effort to assist with the upward mobility crisis, PBS Charlotte is proposing a four-year community engagement campaign beginning fall 2017 through spring 2021.

This three-part project uses media to show people how to not just be dreamers, but doers with an emphasis on pathways to success and career exploration in order to broaden their horizons about what their destiny could look like.

## Educational Outreach

A large portion of PBS Charlotte's educational outreach involves partnerships with local educators, nonprofits and community leaders. The station's support of *American Graduate*, *Cyberchase*, *Raising Readers*, and many other PBS educational initiatives impact the community daily. In 2016, PBS Charlotte offered 100 free literacy workshops impacting more than 6,000 children. The station also deepens community engagement by hosting panel discussions, sneak previews of PBS programs and other events.



In 2016, PBS Charlotte broadcast The Blumey Awards, which recognizes excellence in high school musical theater across the greater Charlotte area.

## NHK WORLD and Create

While WTVI broadcasts PBS on its primary channel (42.1), the station's two secondary channels broadcast NHK WORLD in HD (42.2) and Create (42.3). NHK WORLD is the international service of NHK, Japan's largest broadcasting organization. Create is an American digital broadcast television network which broadcasts how-to, DIY and other lifestyle-oriented instructional programming 24 hours a day.



## Internships

A limited number of internships are available in the spring, summer and fall. For consideration, applicants must be enrolled in a college program and apply by the deadline date. More details are available at [PBSCharlotte.org/internships/](http://PBSCharlotte.org/internships/).

## Central Piedmont TV

PBS Charlotte also produces high-quality content for Central Piedmont TV, a 24/7 cable channel which began airing local educational programming in 1994. Spectrum Cable and AT&T U-verse air Central Piedmont TV on Channel 17. Central Piedmont TV broadcasts a number of programs like "Charlotte Cooks," "Perfiles Latinos de Charlotte," and "Trail of History." All of these programs are available on demand at [youtube.com/my\\_videos?o=U](https://youtube.com/my_videos?o=U)



## Digital Media Programs of Study for Students

PBS Charlotte supports community service outreach goals of the College and its commitment to learning. The station collaborates with the Digital Media, Journalism and Communication Division in giving students access to PBS Charlotte as a learning lab. Course information is available at [cpcc.edu/digital-media-comm](http://cpcc.edu/digital-media-comm).

## Campus Addresses and Websites

### Site Locations

Cato Campus (p. 40) Charlotte, NC 28215	704.330.4800	8120 Grier Road,
	web address	<a href="http://cpcc.edu/campuses/cato">cpcc.edu/campuses/cato</a>
Central Campus (p. 41) Avenue, Charlotte, NC 28204	704.330.2722	1201 Elizabeth
	web address	<a href="http://cpcc.edu/campuses/central">cpcc.edu/campuses/central</a>
City View Center (p. 42) Charlotte, NC 28028	704.330.5455	1609 Alleghany Street,
	web address	<a href="http://cpcc.edu/campuses/cityview">cpcc.edu/campuses/cityview</a>
Harper Campus (p. 43) Street, Charlotte, NC 28273	704.330.4400	315 West Hebron
	web address	<a href="http://cpcc.edu/campuses/harper">cpcc.edu/campuses/harper</a>
Harris Campus (p. 44) Campus Drive, Charlotte, NC 28208	704.330.4600	3210 CPCC Harris
	web address	<a href="http://cpcc.edu/campuses/harris">cpcc.edu/campuses/harris</a>
Levine Campus (p. 45) Road, Matthews, NC 28105	704.330.4200	2800 Campus Ridge
	web address	<a href="http://cpcc.edu/campuses/levine">cpcc.edu/campuses/levine</a>
Merancas Campus (p. 46) Huntersville, NC 28078	704.330.4100	11930 Verhoeff Drive,
	web address	<a href="http://cpcc.edu/campuses/merancas">cpcc.edu/campuses/merancas</a>
WTVI PBS Charlotte (p. 47) Avenue, Charlotte, NC 28205	704.330.5942	3242 Commonwealth
	web address	<a href="http://cpcc.edu/campuses/wtvi">cpcc.edu/campuses/wtvi</a>

### Information Call Center

704.330.2722 • 704.330.CPCC TTY 704.330.6131

Critical College Information Hotline Number: 704.330.6888

**College Internet Address** [cpcc.edu](http://cpcc.edu)

### College Mailing Address

Central Piedmont  
P.O. Box 35009  
Charlotte, NC 28235-5009

### College Package Delivery

Central Piedmont  
1325 E. 7th Street  
Charlotte, NC 28204

## Cato Campus

Contact Cato Campus by phone at 704.330.4800, or visit the Cato Campus website.

### History

Cato Campus is located in the University area of Charlotte at the corner of W.T. Harris Boulevard and Grier Road. Among Central Piedmont campuses, it has the third largest number of students with diverse services for a diverse student body. General education classes are offered along with Corporate & Continuing Education (CCE) and College & Career Readiness (CCR) classes. Curriculum classes are offered for Associate in Arts and Associate in Science degree transfer programs, as well as for Associate in Applied Science degree programs. The campus also is home to the Professional Careers Division which includes four programs of study: Paralegal, Interpreter Education and American Sign Language, Horticulture and Turfgrass, and Office Administration. Office Administration's faculty are located on the Central Campus in the Levine Building.

Cato I Building, identified by its prominent dome, opened in 2002 with classrooms, offices, student services, computer labs, a bookstore and a law library. Included was a horticulture building and greenhouse. With state bond monies, Cato II opened in 2007, doubling the number of classrooms and offices at the campus and adding a general library to campus amenities. In 2007, Charlotte-Mecklenburg Schools and Central Piedmont opened the county's first Middle College High School at Cato, providing access to college classes for 200 high school juniors and seniors. The Central Piedmont Paralegal program at Cato received a substantial gift from William K. Diehl, Jr. in June 2010 and was subsequently named in his honor. In 2011, Cato II was renovated to add a learning lounge, café, Student Life Center and expanded Barnes & Noble Bookstore.

In November 2013, Mecklenburg County voters approved a bond referendum to support further growth at Central Piedmont. As a result, in January 2016, Cato III opened for classes, doubling the size of the campus and adding needed services, including a library, American Sign Language Interpreter labs, a Student Life Center and College and Career Readiness Intake. In addition, program and administrative offices moved from Cato I and II Buildings to Cato III. Included was expanded parking, accessible via a bridge across a creek and protected green space.

### CMS Middle College High School at Cato

Cato Middle College High School reached its legislated capacity of 100 juniors and 100 seniors each of the past several years, with a wait list generated annually. Cato Middle College students, under Principal Alicisa Johnson since 2014, earned distinctions, scholarships and college acceptances beyond their Mecklenburg County peers. Starting Fall semester 2016, students are able to remain with Charlotte-Mecklenburg Schools at Cato Middle College for a 13<sup>th</sup> year in order to accumulate more college credits at no cost with the goal of completing associate degrees. Several Cato Middle College graduates have received Central Piedmont associate degrees along with their CMS diplomas.

### Major Programs/Courses Offered

College Transfer and General Education  
College & Career Readiness  
Adult ESL-English as a Second Language  
High School Equivalency Preparation

Corporate and Continuing Education  
 Horticulture Technology (A.A.S. Degree, Certificates, Career & College Promise Certificates)  
 Interpreter Education (A.A.S. Degree, American Sign Language Certificate, Career & College Promise Certificate)  
 Paralegal Technology (A.A.S. Degree, Post-baccalaureate Diploma)  
 Turfgrass Management Technology (A.A.S. Degree, Certificates, Career & College Promise Certificate)

## Services/Facilities

Cato I and Cato II Buildings house student services, financial aid, registration / cashiering, a veterans resources center, offices and classrooms. As part of the 2013 Mecklenburg County bond package, enhancements include recently renovated science classrooms, a state-of-the-art math emporium and new student services spaces for First Year Experience and orientation programs. The bookstore was expanded to offer food and coffee service along with textbooks and supplies.

The Horticulture compound houses classrooms, offices, a greenhouse, an equipment storage building, plus outdoor horticulture and turfgrass classrooms and fields for design training. The bond package supported the construction of a new head house (a work center for greenhouse operations) and small engine repair shop to accommodate classes for this in-demand area.

Cato III building houses Student Life, a student lounge, auditorium, a multipurpose room, a landscape design studio, and the Smart Market (a self-checkout food and snacks retail spot) on the ground floor. The first floor provides classrooms, security office, family restroom and study spaces, as well as the Patty and Bill Gorelick Art Gallery. The College and Career Readiness Registration Center, classrooms, and faculty offices or work stations are on the second floor, along with a second family restroom and a quiet room available for reservation. The top floor of Cato III houses the Library, ASL Interpreter Education labs, offices and classrooms, a conference room, the Professional Careers Division and Dean's offices. The Rodgers amphitheater offers outdoor study space as well as a venue for theater, music and classes. Landscape design projects, some designed by students, enhance several areas of the campus.

## CATS Services

Public transportation is provided to Cato Campus by the Charlotte Area Transportation Service (CATS). Route 3 (east/west) and Route 29 (north/south) run regularly Monday through Saturday. Pick up and drop off stops are on the Cato Campus near the Cato III building.

## Campus Dean

George A. Henderson  
 Dean, Cato Campus / Professional Careers Division  
 George.Henderson@cpcc.edu  
 704.330.4806

## Services Offered on this Campus

Service	Offered Here
Academic Learning Center (tutoring)	Y
Admissions	Y
Advising	Y
Bookstore	Y
Career Services	Y
Cashier	Y

CLEP Examinations	N
Coffee Shop	N
College & Career Readiness (CCR)	Y
Copy Machines / Printers	Y
Corporate & Continuing Education (CCE)	Y
Counseling	Y
Disability Services	Y
DRE Lab	Y
Financial Aid / Veterans Affairs	Y
Fitness Center	N
Graduation Services	Y
Human Resources*	Y
Law Library	Y
Library	Y
Math Emporium	Y
Orientation for New Students	Y
Outreach & Recruitment	Y
Placement Testing	Y
Public Transportation (CATS routes 3 and 29)	Y
Registration	Y
Service-Learning*	Y
Student Computer Labs	Y
Student Life / SGA	Y
Student Records	Y
Student Success Center	Y
Student Support Services/TRIO	N
Tour for Prospective Students	Y
Transfer Resource Assistance*	Y
Vending Machines & Smart Market	Y
Vending	
Veterans Services Center	Y

(asterisk denotes part-time service)

## Central Campus

Contact the College's Information Call Center at 704.330.2722 or visit the Central Campus website.

## History

In 1963, the North Carolina General Assembly passed the community college bill. Opening as a fully integrated institution, Central Piedmont combined the programs of the Central Industrial Education Center (CIEC) on Elizabeth Avenue and Mecklenburg College on Beatties Ford Road. The college sold its property on Beatties Ford Road and developed a campus around the old Central High School complex located at Elizabeth Avenue and Kings Drive. As the college acquired surrounding property, demolished buildings and closed streets, the original 3.94 acres expanded into a beautiful, tree shaded, 31-acre Central Campus. This campus, the largest in the college's multi-campus system, serves more than 25,000 students annually. Central Campus is the site location for the Advanced Technologies Center, Health Careers Building, the Phillip L. Van Every Culinary Arts Building, Levine Information Technology Building, the Library, the North Classroom Building for College and Career

Readiness, the Christa and Reece A. Overcash Academic and Performing Arts Center, which houses the Dale F. Halton Theater, and Student Life programs. The Central High Building houses the majority of Enrollment and Student Services including, Cashiering, Counseling, Disability, Testing, the Graduation Office, and the Bank of America Center for Military Veterans and Families.

## High Schools Near the Campus

High Schools near Central Campus are Garinger, Harding University, Myers Park, Philip O. Berry Academy of Technology and West Charlotte.

## Majors Divisions/Programs Offered

Allied Health Sciences  
 Visual and Performing Arts  
 Broadcasting and Production Technology  
 Business Administration  
 College and Career Readiness  
 College Transfer  
 Culinary Arts  
 Corporate and Continuing Education  
 Digital Media/Film  
 Engineering Technologies  
 Entrepreneurship and Small Business  
 Health and Physical Education  
 Hospitality Management  
 Human Services  
 Information Technology  
 International Services and Foreign Languages  
 Nursing  
 Science, Technology, Engineering and Math  
 Simulation and Game Development  
 Sustainability Technologies

## Food Services

Sbarro Pizza and Taco Del Mar food services are available on the first floor of the Overcash Center. Subway food service is available on the first floor of the Levine Technology Building. Coppa Coffee and Tea Café food service is available on the first floor of the Library.

## Campus Dean

Dr. Paul Koehnke  
 Dean of Central Campus, Culinary Arts / Digital Media, Journalism & Communication Division / Visual and Performing Arts / Early Childhood & Teacher / Physical Education / Cosmetology  
 Paul.Koehnke@cpcc.edu  
 704.330.6121

## Services Offered on this Campus

Service	Offered Here
Academic Learning Center (tutoring)	Y
Admissions	Y
Advising	Y
Bookstore	Y
Career Services	Y
Cashier	Y
Center for Military Families and Veterans	Y

CLEP Examinations	Y
College and Career Readiness	Y
Copy Machines	Y
Counseling	Y
Disability Services	Y
Family Resource Center	Y
First Year Experience	Y
Financial Aid/Veterans Affairs	Y
Fitness Center	Y
Graduation Services	Y
Hot Food	Y
Library	Y
Outreach and Recruitment	Y
Placement Testing	Y
Public Transportation	Y
Registration	Y
Service-Learning	Y
Single Stop	Y
Student Computer Labs	Y
Student Life	Y
Student Records	Y
Student Success Center	Y
Student Support Services	Y
Tour for Prospective Students	Y
Transfer Resource Center	Y
Vending Machines	Y

## City View Center

Contact Central Piedmont Cosmetology at the City View Center by phone at 704.330.5455, or visit the City View Center website.

## History

The Cosmetology Program began its first class in the fall of 2013. It is governed by Central Piedmont policies and the NC State Board of Cosmetic Art Examiners. The curriculum is based on the Pivot Point International Designer's Approach Libraries. As a Pivot Point Academy, Central Piedmont offers cosmetology education which is shared all over the world.

Cosmetology is a highly specialized program based on scientific principles which combines practical arts, cosmetic science and academic subject matter in the use of cosmetics for all areas of hair, nail and skin care, including makeup application.

Students are prepared for a successful career in cosmetology through essential learning experiences in the classroom and in a salon clinic. It is a clock hour program in a state-of-the-art facility set up for the delivery of high quality personal care services to the public.

Central Piedmont Cosmetology is committed to clients within the community and to preparing students to attain skills necessary for entry level employment in the field of cosmetology. The program is dedicated to student success and promotes high levels of proficiency for rewarding careers in the beauty industry.

## High Schools Near the Center

High Schools near City View Center are Harding High School and Phillip O' Berry Academy.

## Major Programs/Courses Offered

Associate in Applied Science in Cosmetology (p. 151)

The Associate in Applied Science Degree – Cosmetology is awarded by the college upon completion of this program. See Cosmetology under Programs of Study / Associate in Applied Science Degrees, Diplomas, Certificates.

### Career and College Promise Program

This program allows students begin a cosmetology degree by earning dual credit during their junior and senior years of high school.

### Cosmetology Teacher Licensure

Course credits are offered for licensed cosmetologists in the State of North Carolina who are interested in completing their teacher certification in cosmetology.

### Natural Hair Care Certification

Training and certification for natural hair care licensing is provided. Credentials to practice in a licensed salon can be earned in 16 weeks.

## Site Facility

Central Piedmont Cosmetology is located in the City View Center at 16069 Alleghany Street at the intersection with Ashley Road in West Charlotte.

The facility offers free parking to salon patrons, a welcoming reception space, a beautiful salon and a full kitchen student lounge. The salon clinic houses 50 advanced level workstations for performing cosmetic art services, three facial and makeup application spaces, five manicure stations, three pedicure thrones, 14 hair dryers, and 10 shampoo bowls for providing services to the public. Two additional beginner practice rooms are designated for student practice prior to salon performance. Two smart classrooms are available for theoretical classes specific to cosmetology scientific principles.

## Program Chair

Catherine Cunningham  
Sr. Program Coordinator, Cosmetology  
NC Cosmetologist, NC Cosmetology Teacher, NC Natural Hair Care Specialist, NC Natural Hair Care Teacher, AAS Cosmetology, BA, MSL  
catherine.cunningham@cpcc.edu  
704.330.5451

## Services Offered

Cosmetology Salon Services are offered to the public as a relevant practice method to students' daily training. Visit the Central Piedmont Cosmetology website to see a list of all services provided in the beautiful state-of-the-art salon spa facility.

## Harper Campus

Contact Harper Campus by phone at 704.330.4400, or visit the Harper Campus website.

## History

Designed for teaching Applied Technology and Construction programs, the Harper Campus provides specialized, state-of-the-art labs for hands-on training in addition to classroom instruction. The campus has a full offering of classes that transfer to a college or university, pre-college programs, and Corporate and Continuing Education classes. Opened in 1999 as the Southwest campus, it was rededicated in September 2004 as Harper Campus. Conveniently located in the Arrowood and Westinghouse business corridor, Harper Campus functions as a training partner with local business and industry.

## High Schools Near the Campus

The high schools near Harper Campus are E.E. Waddell Language Academy, Myers Park, Olympic and South Mecklenburg.

## Harper Middle College High School

This partnership between Central Piedmont and Charlotte-Mecklenburg Schools is designed for high school juniors and seniors who want to complete their high school graduation requirements while earning college credit through Central Piedmont. This program is for the mature, focused student who is ready for the college environment.

Middle College High Schools are just one of three learning options under the umbrella program of Career & College Promise (CCP) for high school students which allows dual enrollment in both Central Piedmont and CMS. Career and College Promise students also are able to choose a career and technical option called College Transfer Pathway and/or complete an associate degree, **tuition free**, at Central Piedmont while they finish high school. To accomplish this, Middle College High School students may remain officially enrolled in high school for a 13th year and continue to take Central Piedmont courses to earn an Associate of Applied Arts or Science degree or a technical certification with which to begin their careers.

The principal of the Harper Middle College is Brandy Nelson. She may be contacted by email at [brandy.nelson@cms.k12.nc.us](mailto:brandy.nelson@cms.k12.nc.us).

## Major Programs/Courses Offered

Advertising + Graphic Design  
Air Conditioning, Heating and Refrigeration  
College and Career Readiness  
Construction Management  
Construction Trades  
Corporate and Continuing Education  
Crowder Construction Institute  
Courses designed to transfer to a college or university:  
English, Math, Reading, Communications, Behavioral and Social Sciences, Humanities and Fine Arts.  
Electrical Systems Technology  
English as a Second Language (ESL)  
Graphic Arts and Imaging Technology  
Harper National Flexographic Center  
High School Equivalency Preparation  
Non-Destructive Examination  
Pathways to Employment  
Pre-College programs  
Welding Technology



## Facilities

Harper Campus is a comprehensive facility with nine computer labs (5 PC, 4 Mac) and 23 technology labs (Construction, Air Conditioning, Heating, and Refrigeration, Welding Technology, Electrical Systems Technology, Graphic Arts, Flexography, Advertising + Graphic Design, Non-Destructive Examination). The campus houses 23 classrooms, an auditorium, conference rooms, a science lab, an English as a Second Language (ESL) lab, an Adult Basic Literacy Program (ABLE) and General Educational Development (GED) lab, a testing center, a library, a bookstore and a student life center.

## Campus Dean

Mr. Kelly Trainor  
 Dean, Harper Campus / Applied Technologies Division / Construction Institute  
 Kelly.Trainor@cpcc.edu  
 704.330.4409

## Services Offered on this Campus

Service	Offered Here
Admissions	Y
Advising	Y
Bookstore	Y
Career Services	Y
Cashier	Y
CLEP Examinations	N
Cooperative Education	Y
Copy Machines	Y
Counseling	Y
Disability Services	Y
Financial Aid/Veterans Affairs	Y
Fitness Center	N
Graduation Services	Y
Hot Food	N
Library	Y
Outreach & Recruitment	Y
Placement Testing	Y
Public Transportation	Y
Registration	Y
Student Computer Labs	Y
Student Life	Y
Student Records	Y
Student Success Center	Y
Student Support Services	Y
Tour for Prospective Students	Y
Vending Machines	Y

## Harris Campus

Contact Harris Campus by phone at 704.330.4600, or visit the Harris Campus website

## History

The Harris Campus first opened in 2001 and expanded in 2005 with the addition of Harris II Building and the Harris Conference Center, which primarily serves business and industry clients. Located near the intersection of Billy Graham Parkway and Morris Field Drive, the Harris Campus provides a multi-purpose auditorium, classrooms and various labs to support learning needs of students and business clients. Corporate and Continuing Education classes serve adults in various career-focused courses and certification programs. Also located on Harris Campus are the Corporate Learning Center, the James R. Worrell Sr. Financial Services Institute and the Patty and Bill Gorelick Gallery.

## High Schools Near the Campus

The high schools nearest to the Harris Campus are Harding University, West Charlotte, West Mecklenburg and Philip O. Berry Academy of Technology.

## Major Programs/Courses Offered

Baking and Pastry Arts  
 Charlotte Cooks™  
 Computer Training  
 Corporate and Continuing Education  
 Corporate Learning Center  
 Customized Training  
 Dental Assisting  
 Dietary Managers Training Program  
 Early Childhood Education  
 Economic Development and Career Readiness  
 English Emporium  
 Fire Protection Technology  
 General Education and College Transfer  
 Human Resources Development  
 Insurance  
 James R. Worrell Sr. Financial Services Institute  
 Lateral Entry Teacher Education  
 Management and Leadership Development  
 Math Emporium  
 Mortgage Banking  
 Notary  
 Personal Enrichment  
 Process Improvement, Lean, Six Sigma  
 Project Management and Business Analysis  
 Real Estate, Appraisal and Property Management  
 Teacher License Renewal

## Services

Services include day/evening/weekend classes, admissions, advising, career services, cashier, counseling, financial aid, placement testing, registration, student computer labs, student life, student records, copy machines, public transportation, vending machines, Aspire Bistro and convenient parking. The Harris Campus library is in Room 2100 of Harris I Building.

## Facilities

The Harris Campus has two separate buildings. Harris I Building (H1) includes 22 classrooms which serve the bulk of general education and curriculum classes. The Harris Conference Center occupies the first floor

of Harris II (H2) Building. The second floor has 11 classrooms to serve students and clients in Corporate and Continuing Education.

## Campus Dean

Mary Vickers-Koch  
Dean, Harris Campus  
Associate Vice President, Corporate & Economic Development / Business & Industry Learning  
Mary.Vickers-Koch@cpcc.edu  
704.330.4640

## Services Offered on this Campus

Service	Offered Here
Admissions	Y
Advising	Y
Bookstore	Y
Career Services	Y
Cashier	Y
CLEP Examinations	N
Copy Machines	Y
Counseling	Y
Disability Services	Y
Financial Aid/Veterans Affairs	Y
Fitness Center	N
Graduation Services	Y
Hot Food	Y
Library	Y
Outreach & Recruitment	Y
Placement Testing	Y
Public Transportation	Y
Registration	Y
Student Computer Labs	Y
Student Life	Y
Student Records	Y
Student Success Center	Y
Student Support Services	Y
Tour for Prospective Students	Y
Vending Machines	Y

## Levine Campus

Contact Levine Campus by phone at 704.330.4200, or visit the Levine campus website.

## History

The Levine Campus opened for classes in fall 1998. It was the second full-service campus to open away from the Central Campus. It is a 230,000-square-foot, mall-type design, with all services under the same roof.

Serving more than 9,300 students, the current facility is near maximum capacity with classes running seven days per week. As part of the 2013 Bond Project, the Levine Campus has added Phase III, an 88,000-square-foot, three-story building which will host 2,875 additional students.

## High Schools Near the Campus

The high schools close to the Levine Campus are Ardrey Kell, Butler, East Mecklenburg, Independence and Providence.

## Levine Middle College High School

This partnership between Central Piedmont and Charlotte-Mecklenburg Schools is designed for high school juniors and seniors who want to complete their high school graduation requirements while earning college credit through Central Piedmont. The program opened in spring 2014. As of 2017, Levine Middle College students may begin their 13th year and earn their Associate of Applied Arts or Science or technical certification to begin a career. Applications for admission may be obtained from the Principal, Mr. Joey Burch at joey.burch@cms.k12.nc.us

## Major Programs/Courses Offered

Classes offered on Levine Campus are both college credit curriculum courses and non-credit continuing education courses. Most of the curriculum classes are general education courses for students seeking transfers to four-year colleges or for students seeking two-year degrees in business administration. A wide array of Corporate and Continuing Education non-degree and non-transfer courses and programs also are offered for those wishing to acquire professional workplace credentials, training and skills or explore areas of personal interest. Corporate and Continuing Education courses have various starting and ending dates, course lengths, and subjects. They are designed to meet the needs of the community at large and range from mandatory licensure updates to personal enrichment, recreation, and leisure classes.

## Services

Services on Levine Campus include: admissions, counseling and advising, graduation, registration, college transfer, placement testing, career services, library, cashiering, financial aid/veteran's services, the Center for Military Families, Veterans, student life, disabilities counseling, tutoring, parking, security, college and career readiness, and cooperative education workplace learning (Co-op and Internships). Food service during the week is provided by Subway and Calvine's Coffee.

## Facilities

Located beside a small lake, the Levine Campus has 1,497 adjacent parking spaces. The campus houses 136 full-time faculty and staff plus more than 145 part-time faculty and staff. It has more than 100 state-of-the-art smart classrooms with capacities from 18 to 95 seats. About 25 percent of classrooms are computer instruction classrooms. The student commons area features a cyber café. The facility also includes two art rooms, two biology and three chemistry flex labs, two student technology centers, two dance/aerobics room, a fitness/weight room, a transfer resource center, an academic learning center for tutoring, a language lab, and testing and course placement services. The new Levine III building holds the Georgia Tucker Fine Arts Hall, a black box multipurpose performing arts theatre which seats 125, and a state-of-the-art Health Careers instructional center.

## Joe Hendrick Center for Automotive Technology

The Joe Hendrick Center for Automotive Technology on the Levine Campus was made possible by a generous donation from Rick Hendrick. The center is a 34,000 square foot high-tech instructional facility that houses the BMW ADP, Honda PACT and Subaru University automotive

curriculum programs as well as a NATEF Master certified automotive training program. The center also is home to a GM regional training center. For those looking for a career and aspiring to be automotive technicians, the Joe Hendrick Center provides top-tier training, as well as being a resource for those technicians who seek to upgrade their automotive skills and knowledge. Electrical and fuel labs in the Joe Hendrick Center feature cutting edge automotive system training simulators that can be programmed and diagnosed. The computer lab offers students the most current repair data from OE manufacturers and aftermarket suppliers, many of which partner with the college for training. More than 30 late-model vehicles are used as training aids in lab environments. The Joe Hendrick Center is truly a full line training facility.

## Campus Dean

Dr. Edith Valladares McElroy  
 Dean, Levine Campus / Business & Accounting Division / International and General Studies  
 Edith.McElroy@cpcc.edu  
 704.330.4227

## Services Offered on this Campus

Service	Offered Here
Academic Learning Center	Y
Admissions	Y
Advising	Y
Art Gallery	Y
Bookstore	Y
Career Services	Y
Cashier	Y
Center for Military Families & Veterans	Y
CLEP Examinations	N
College & Career Readiness	Y
Counseling	Y
Disability Counseling	Y
Financial Aid/Veterans Affairs	Y
Fitness Center	Y
Graduation Services	Y
Hot Food	Y
Library	Y
Multi-functional printers	Y
Multipurpose Black Box	Y
Outreach & Recruitment	Y
Placement Testing	Y
Public Transportation	Y
Registration	Y
Sponsored Programs	Y
Student Computer Labs	Y
Student Life	Y
Student Records	Y
Student Success Center	Y
Student Support Services	Y
Student Technology Centers	Y
Tour for Prospective Students	Y
Transfer Resource Center	Y

Vending Machines	Y
Workplace Learning (Co-op and Internships)	Y

## Merancas Campus

Contact Merancas Campus by phone at 704.330.4100, or visit the Merancas Campus website.

## History

Merancas Campus (formerly North Campus) was the #1st area campus of Central Piedmont.

The Claytor Building (CL), named for former Chairman of the Central Piedmont Board of Trustees, Bill Claytor, was dedicated as the North Center in October 1990. The North Center became North Campus with the addition of the Public Safety Building six years later. In May 2011, North Campus became Merancas Campus, named for the Merancas Foundation, Inc. of Charlotte, N.C.

The Public Safety Building, funded with local bond money, is the result of a collaborative effort that included area law enforcement professionals, community college leaders and relevant public groups. Groundbreaking ceremonies were held in October, 1995 and the Public Safety Building was occupied in December 1996. On November 3, 2000, this building became the Claudia Watkins Belk Center for Justice (CJ), named after one of Charlotte's most prestigious and prominent citizens.

The Transport Systems Technology Building (TS), occupied in the fall of 2006, was funded by a state bond referendum. The TS Building houses the Automotive Technology, Autobody Repair and Heavy Equipment Technology programs, as well as a variety of other general education classes and instructors' offices.

## High Schools Near the Campus

High schools near Merancas Campus are North Mecklenburg, Hopewell, Lake Norman Charter, Hough and Mallard Creek.

## Major Programs/Courses Offered

### General Education

- Classes leading towards A.A./A.S. degrees
- College and Career Readiness
- College Transfer classes
- Corporate and Continuing Education classes
- High School Equivalency Preparation

### Public Safety

- Basic Law Enforcement Training & Police Academy Pre-Certification
- Criminal Justice Technology
- Emergency Medical Training & Emergency Management
- Forensics Institute: American Academy of Applied Forensics
- Public Safety (Corporate and Continuing Education)

### Transport Systems

- Automotive Systems Technology
- Collision Repair and Refinishing Technology
- Heavy Equipment and Transport Technology
- Motorsports Related Offerings
- Race Car Technology Certificate (under Automotive Systems Technology Degree Program)

## Merancas Middle College High School

A partnership between Central Piedmont and Charlotte-Mecklenburg Schools (CMS), the Merancas Middle College High School is designed for high school juniors and seniors who want to complete their high school graduation requirements while earning college credit through Central Piedmont. Applications for admission may be obtained from the CMS Principal, Jametta Martin-Tanner at [jametta.tanner@cms.k12.nc.us](mailto:jametta.tanner@cms.k12.nc.us).

### Facilities

Claytor Building is a single-story, 10,000 square foot building comprised of a computer classroom, a testing center, a bookstore, a staff lounge, administrative offices, a conference room, an admissions/registration/cashiering office, a student success center, an academic counseling office, a security office, a financial aid office and faculty touchdown stations.

The Claudia Watkins Belk Center for Justice Building is a single-story, 37,000 square foot building which contains eight classrooms, a computer lab, a science lab/classroom, a forensics lab/classroom, a fitness room, a courtroom, a tutoring area, 11 offices, a student lounge, a staff lounge, a 200-seat auditorium and a conference room. In 2005, a 2,000 square foot crime scene simulation facility was added.

The two-story, 110,000 square foot Transport Systems Technology building houses Automotive Technology, Collision Repair and Heavy Equipment Technology programs, a student lounge, a library, a student technology center, three computer classrooms, five general education classrooms, plus faculty and administrative offices. The Merancas Campus Library is in Room 243 of the Transport Systems building.

### Dean

Tamara Williams  
 Dean, Merancas Campus / Public Safety Division / Transport Systems Technologies Division  
[Tamara.Williams@cpcc.edu](mailto:Tamara.Williams@cpcc.edu)  
 704.330.4130

### Services Offered on this Campus

Service	Offered Here
Admissions	Y
Advising	Y
Bookstore	Y
Career Services	Y
Cashier	Y
CLEP Examinations	N
Copy Machines	Y
Counseling	Y
Disability Services	Y
Financial Aid/Veterans Affairs	Y
Fitness Center	Y
Graduation Services	N
Hot Food	N
Library	Y
Outreach & Recruitment	N
Placement Testing	Y
Public Transportation	Y

Registration	Y
Student Computer Labs	Y
Student Life	Y
Student Records	Y
Student Success Center	Y
Student Support Services	Y
Tour for Prospective Students	Y
Vending Machines	Y

## WTVI PBS Charlotte

While viewers have many choices when it comes to television content, there is only one station specifically serving the Charlotte region with high-quality national and local content as well as impactful, educational outreach and that's WTVI PBS Charlotte.

### History

WTVI PBS Charlotte, located on Commonwealth Ave. in Charlotte, N.C., has served residents in North and South Carolina for nearly 52 years.

WTVI signed on the air August 27, 1965, operating on UHF Channel 42 and under a license held by the Charlotte-Mecklenburg Board of Education. Initially, the station provided only in-school instruction. Gradually, WTVI added public programs to the schedule. By 1968, the station was on the air 14 hours a day.

In December 1978, as the school system's need for in-school programming waned, the Board of Education appointed a task force to determine the best use for WTVI. The task force recommended the school board relinquish control of the station to an independent authority, which would hold the license and supervise the station's operation as the Carolinas' only community-owned and operated public television station.

The Authority, known as the Charlotte-Mecklenburg Public Broadcasting Authority, was organized in July 1981 and assumed the station's license in July 1982. The station broadcast both national PBS programs and a wide array of local programs.

In April 2001, WTVI began broadcasting HD on VHF Channel 11.

The station was acquired by Central Piedmont Community College (CPCC) on July 1, 2012, and became an educational licensee for the second time in its history. PBS Charlotte is committed to serving the community and as outreach for CPCC. For additional information about the station, visit [PBSCharlotte.org/](http://PBSCharlotte.org/) or access the station's Facebook page.

### Local Programs

In addition to producing documentaries and specials, PBS Charlotte produces five regular programs:

- "Carolina Impact" explores the issues, people and places that impact the region (Tuesday at 8 p.m. & 11 p.m., Thursday and Saturday at 5:30 p.m., Sunday at 11:30 a.m.).
- "Trail of History" showcases historic figures and events that have influenced the Charlotte region (Tuesday at 8:30 p.m. & 11:30 p.m., Saturday at 5 p.m.).
- "Off The Record" talks about the latest news of the week. (Friday at 8 p.m., Sunday at noon.)
- "Charlotte Cooks" teaches viewers how to expand their culinary talents (Tuesday at 5:30 p.m.).



- "Carolina Business Review" focuses on business and industry in the Carolinas (Friday at 8:30 p.m., Sunday at 12:30 p.m.).

A complete listing of PBS Charlotte's local and national programming is available at [PBSCharlotte.org/tv-schedule/](http://PBSCharlotte.org/tv-schedule/).

## Facility

When WTVI opened in 1965, the original building occupied 12,000 square feet. The station completed an expansion and renovation in November 1990 which tripled the size of its facilities to 37,000 square feet. The station has a 68' x 84' studio with a capacity of 100, as well as audio/video studio control rooms, post production, master control and edit suites. In June 2016, the production control room was dedicated in honor and memory of Harold A. Bouton Jr., president and general manager of WTVI from 1983-2003. PBS Charlotte reaches more than 1.2 million households across its 13-county service area which includes: Anson, Cabarrus, Catawba, Cleveland, Gaston, Iredell, Lincoln, Mecklenburg, Rowan, Stanly, Union, Lancaster (SC) and York (SC).

## NHK WORLD & Create

While WTVI broadcasts PBS on its primary channel (42.1), the station's two secondary channels broadcast NHK WORLD in HD (42.2) and Create (42.3). NHK WORLD is the international service of NHK, Japan's largest broadcasting organization. Create is an American digital broadcast television network which broadcasts how-to, DIY and other lifestyle-oriented instructional programming 24 hours a day.



## Charlotte Broadcast Hall of Fame & Station Tours

In 2015, the station opened the Charlotte Broadcast Hall of Fame which honors local broadcasting pioneers. Visitors can interact with electronic tablets to watch stories about each of the Hall of Fame inductees. To schedule a station tour for your school or community group, visit [PBSCharlotte.org/education-outreach](http://PBSCharlotte.org/education-outreach).

## Internships

A limited number of Internships are available in the spring, summer and fall. For consideration, applicants must be enrolled in a college program and apply by the deadline. More details are available at [PBSCharlotte.org/internships/](http://PBSCharlotte.org/internships/).

## Programs/Courses Offered

In addition to offering internships for students, PBS Charlotte also has a state-of-the-art classroom where a number of CPCC journalism, broadcasting, and production technology classes are offered. Course information is available at [cpcc.edu/digital-media-comm](http://cpcc.edu/digital-media-comm).



CPCC Journalism class at PBS Charlotte

## Central Piedmont Foundation / Institutional Advancement

The Central Piedmont Foundation exists solely for the benefit of the college and its students. The Foundation solicits philanthropic contributions from individuals, corporations and foundations to support student scholarships, instructional equipment, capital projects, programs, innovation and recognition awards, endowment funds and a variety of other needs not met through traditional funding sources.

Annual Swirl, Charlotte Skyline Run and Sporting Clays Classic events are sponsored by the Foundation to raise support and visibility for the college and its programs. The Foundation also works to engage college alumni in the life of their alma mater.

Ways to support the work of the college include gifts of cash or securities, bequests, estate plans, honorariums and memorial funds made payable to the Central Piedmont Community College Foundation, Inc. Contributions may be designated for specific programs and projects and may be given outright or through a pledge extended over a period of time.

All donations for the college should be directed to the Central Piedmont Community College Foundation Inc., a 501(c)(3) organization, qualified to receive tax-deductible contributions. Student clubs wishing to raise financial support should contact the Foundation at the beginning of their planning phase. Students, faculty and staff may be interested in learning more about Project Funder at Central Piedmont: focused, short-term fundraising drives designed to build support for specific projects across the college.

The address is:

The Central Piedmont Foundation Inc.  
PO Box 35009  
Charlotte, NC 28235-5009

For more information, call the Central Piedmont Foundation at 704.330.6869 or visit Central Piedmont Foundation website.

## Central Piedmont Terminology

The explanations below define terms frequently used at Central Piedmont Community College.

**Academic or Faculty Advisor:** a member of the faculty for a specific program who works with students in that program to help them reach their educational goals

**Academic Certificate:** a program comprised of 12-18 semester hours of courses designed to provide entry-level employment training

**Academic Intervention:** the status of students working for a degree, diploma, or certificate when their program GPA in any semester is below Standards of Progress required for the number of semester hours they are taking

**Academic Suspension:** the status of students working for a degree, diploma, or certificate after they have been on Academic Probation and their program GPA remains below Standards of Progress

**Adult High School (AHS):** a program offered in cooperation with the public school system; A diploma is awarded upon program completion and passing of the North Carolina Competency Test

**Advisement Week:** a week each semester, prior to registration, when students are encouraged to meet with their faculty advisors and program counselors

**Associate Degree:** a document awarded to a student signifying successful completion of a two-year curriculum program

**Associate in Arts (A.A.):** a degree granted for successfully completed programs of study consisting of a minimum of 64 semester hours and a maximum of 65 semester hours of college transfer courses

**Associate in Applied Science (A.A.S.):** a degree granted for successfully completed programs of 64-76 semester hours of coursework to provide entry-level employment education; An A.A.S. program must include a minimum of 15 hours of general education and a minimum of 49 hours of major courses with numbers 110-199 or 210-299

**Associate in Fine Arts (A.F.A):** a degree granted for successfully completed programs of study consisting of a minimum of 64 semester hours and a maximum of 65 semester hours of college transfer courses, with an emphasis on the arts

**Associate in Science (A.S.):** a degree granted for successfully completed programs of study consisting of a minimum of 64 semester hours and a maximum of 65 semester hours of college transfer courses, with emphasis on the natural sciences

**BioNetwork:** a statewide initiative that connects community colleges across North Carolina, providing specialized training, curricula and equipment to develop a world-class workforce for the biotechnology, pharmaceutical and life science industries

**Career and College Promise:** a program that provides seamless dual enrollment educational enhancement for eligible North Carolina high school students in order to accelerate completion of college certificates, diplomas and associate degrees that lead to college transfer or provide entry-level job skills

**College and Career Readiness:** pre-college courses that include Adult English as a Second Language (Adult ESL), Adult High School Diploma (HSD), Foundational Skills, High School Equivalency, Human Resource Development, Pathways to Careers and Special Learning Needs

**College Transfer Programs:** programs intended for transfer to senior institutions including the Associate in Arts, Associate in Science and Associate in Fine Arts

**College Visitation Day:** usually held annually in November when representatives from many four-year colleges and universities and representatives of the armed services are available to CPCC students to provide information

**Combined Course Library (CCL):** the set of statewide uniform courses from which North Carolina community colleges must choose their curriculum course offerings

**Common Core Courses:** courses that have been identified as part of a guaranteed transfer articulation with the University of North Carolina system. See Comprehensive Articulation Agreement

**Comprehensive Articulation Agreement (CAA):** an agreement between the North Carolina Community College System and public and private universities to facilitate transfer between community colleges and four-year universities

**Continuing Education Unit (CEU):** a unit of credit toward specific certification awarded for continuing education courses in collaboration with the certifying agency

**Core Competency:** a complex ability essential to lifelong learning that is developed over time; CPCC has identified four core competencies critical to the success of every CPCC graduate: 1) Communication, 2) Critical Thinking, 3) Personal Growth and Responsibility, and 4) Information Technology and Quantitative Literacy; All CPCC graduates are expected to demonstrate proficiency in each of the competencies which go beyond simple content mastery

**Co-requisite:** a course that must be taken during the same term as the course that requires the co-requisite

**Corporate and Continuing Education:** a division of CPCC that offers continuing non-degree education courses, programs and services for employers, organizations and individuals; Codes for these courses have 7000-8000 numbers. Some offer professional CEUs and meet certification and licensing requirements

**Corporate Learning Center (CLC):** a unit of CPCC that works directly with business and industry client companies to provide services, custom course content and exclusive programming, often on site and at preferred times for employers

**Course Description:** a brief description of learning objectives and what the student should be able to do upon completion; Classroom hours, laboratory hours, clinic or co-op hours, credits earned and prerequisite/co-requisite (if needed) are listed

**Credit:** the number of units earned upon completing a curriculum course, measured in semester hours

**Curriculum (also called a program):** a set of courses designed to prepare a student either to enter the workforce immediately upon completion or to transfer to a degree program at a four-year college or university; Depending upon the length of the program, a degree, diploma, or certificate is awarded upon completion

**Developmental Studies Courses:** pre-college courses (identified by code numbers beginning with zero) that prepare students for college-level courses

**Diploma:** a program comprised of 36-48 semester hours, including a minimum of 6 hours general education, which provides entry-level employment training

**Distance Learning (DL):** organized delivery by means other than face-to-face classroom contact, such as via the Internet or telecourse

**Drop/Add:** a period during the first week of classes each term when students may change their class schedules without penalty; See Schedule Adjustment

**Elective Course:** a course that the student may choose to take to meet diploma/degree requirements, as distinguished from required courses; Some electives are specified within areas, such as Technical Electives or Humanities/Art Electives; others are Free Electives

**Fall Break:** a short break in the middle of fall semester when the college is open but classes are suspended

**Final Examination Week:** a period of time at the end of each semester when instructors may schedule final examinations; The examination schedule is published with the Class Schedule so students know at the time of registration when examinations will be

**Full-Time Equivalency (FTE):** the number of hours equivalent to the hours one student is enrolled for the normal academic year of spring and fall terms; This method enables colleges to recognize the impact of part-time students as an aggregate.

**Full-Time Student:** a student enrolled for 12 or more credits during fall and spring terms and for 9 or more credits during summer term

**General Education Courses:** courses required in all degree programs to ensure graduates have the necessary general knowledge, abilities and intellectual skills commensurate with their degrees

**Grade Point Average (GPA):** the total number of grade points earned (A=4; B=3; C=2; D=1; F=0) divided by the total number of semester hours attempted by the student

**High School Equivalency:** a program which provides instruction and testing for adults to complete their high school equivalency

**In-State Student:** a student who is a legal resident of North Carolina

**Lab Fee:** an additional charge for some classes that have labs as part of the course structure; Lab fees are used exclusively by the division to purchase supplies and equipment for the lab to which the fees are applied

**Lateral Entry Teachers:** professionals who have a bachelor's degree, have met state qualifications and hold K-12 teaching positions while seeking initial teaching licensure

**Out-of-State Student:** a student who is a legal resident of a state other than North Carolina, or a legal resident of a foreign country

**Part-Time Student:** a student enrolled for fewer than 12 credits during fall and spring terms and for fewer than 9 credits during summer term

**Prerequisite:** a course that must be completed first to become eligible to enroll in subsequent courses that require the prerequisite

**Program Description:** information about a program including the official definition, degree/diploma/certificate awarded, admissions processing and a list of courses in that curriculum

**Program GPA:** the grade point average of a student in the courses required to complete a program; To remain in good academic standing, students must maintain a program GPA in accord with the hours for which they enroll, as prescribed by the CPCC Grading Policy. Students must have a final program GPA of 2.0 (C) in order to graduate

**Program of Study (POS):** a listing of the exact courses the college offers to fulfill the requirements of a curriculum program

**Schedule Adjustment:** dropping or adding classes without penalty during the first week of each term

**Semester Hours Credits (SHC):** credit assigned to a course that represents contact hours in a normal 16-week semester, based on formulas for class, lab, work and clinical methods of instruction

**Spring Break:** a short break in the middle of spring semester when the college is open but classes are suspended

**Standards of Progress:** guidelines that are part of the CPCC Grading Policy which include requirements for students in degree, diploma and certificate programs to maintain good academic standing; These standards include completion of courses, minimum program GPA and minimum semester GPA. When students do not meet these standards, they are placed on Academic Probation or Academic Suspension, and they work more closely with their faculty advisor or program counselor in order to reach their educational goals.

**State Board of Community Colleges (SBCC):** the governing body of the North Carolina Community College System

**Transcript:** an official student academic record

**Transferability:** the acceptability of credit for a course or program from or to another college or university

**Tuition:** the amount of money a student must pay at the time of registration for each hour of academic credit based on the student's residency classification

**Virtual Learning Community (VLC):** a service of the North Carolina Community College System that provides courses for the colleges in the system to use for distance education

**Workplace Learning:** a program that integrates classroom studies with practical experience in business, industry, public and community agency work situations; Students are partnered with employers for mutually beneficial work-based learning experiences through programs such as Apprenticeship Charlotte, Work-based Learning (formerly Co-op) and internships

## College Administration

### Board of Trustees

Edwin A. Dalrymple — Chairman  
Benton S. Bragg — Vice Chairman  
Dr. Kandi W. Deitemeyer — Secretary

#### Appointed by the Governor

Edwin A. Dalrymple  
Michael S. Hawley  
Caldwell R. Rose  
Judith N. Allison

**Appointed by the Mecklenburg County Board of Commissioners**

Benton S. Bragg  
 Madelyn L. Caple  
 Arthur Griffin, Jr.  
 Dr. Wilhelmenia I. Rembert

**Student Government Association President, Ex Officio Member**

**College President and Cabinet**

Kandi W. Deitemeyer	President
Vacant	Vice President of Academic Affairs
Jeff Lowrance	Vice President of Communications, Marketing, and Public Relations
Marcia Conston	Vice President of Enrollment and Student Services
Mike Whiteman	Vice President of Finance and Administrative Services
David Kim	Vice President of Information Technology Services/Chief Information Officer
Kevin McCarthy	Vice President of Institutional Advancement
Tracie Clark	Vice President of Strategy and Organizational Excellence

**Associate Vice Presidents**

Mark Short	Chief Human Resource Officer
Michelle Miller	Executive Director, Corporate and Workplace Learning
Vicki Saville	Associate Vice President, Facilities and Construction
Jessica Boyce	Associate Vice President, Financial and Auxiliary Services
Michael Horn	Associate Vice President, Government Relations and Grants
Katie Jones	Associate Vice President, Institutional Advancement

**College Deans**

Greg Stanley	Dean, Admissions, Records and Registration
George Henderson	Dean, Cato Campus / Professional Careers
Paul Koehnke	Dean, Central Campus / Culinary, Digital Media, Journalism, Communication and Fine Arts
Karen Pauly	Dean, College and Career Readiness
JJ McEachern	Dean, Enrollment Management
April Jones	Dean, Enrollment Services
Michael Matlock	Campus Administrator, Harris Campus
Steve Corriher	Interim Dean, Harper Campus / Applied Technologies and Construction Institute

Maureen Bumba	Dean, Health Professions and Human Services
Edith McElroy	Dean, Levine Campus / Business, International and General Studies
Gloria Kelley	Dean, Library Services
Tamara Williams	Dean, Merancas Campus / Public Safety and Transport Technologies
Clint McElroy	Dean, Retention Services
Chris Paynter	Dean, Science, Technology, Engineering and Math
Mark Helms	Dean, Student Life and Service Learning

**College Policies and Procedures**

Policies and Procedures for Central Piedmont are accessible on the college's website at [cpcc.edu/administration/policies-and-procedures](http://cpcc.edu/administration/policies-and-procedures). Questions about the college's policies and procedures can be directed to the Office of the Special Assistant to the President.

**College policies and procedures** are organized into seven categories with three appendices:

1. The Equal Opportunity Program
  2. The Board of Trustees
  3. The College Organization
  4. Personnel
  5. Education Programs
  6. College Operations
  7. Students
- Appendices
- A. Bylaws: Classified Staff Council
  - B. Constitution: College Senate
  - C. Constitution: Student Government Association

**Frequently requested student regulations are listed below under section headings where they are found in the catalog.**

**Enrollment (p. 58)**

- CLEP - College-Level Examination Program (p. 64) (*Testing and Assessment section*)
- Transcript Evaluation Process (p. 65)
- Course Credit and Placement (p. 59)
  - > Credit by Examination
  - > Course Credit Guidelines for Military Service
  - > Course Waiver
- Advanced Placement Examination Course Credit Guidelines (p. 59)
- International Baccalaureate Course Credit Guidelines (p. 61)

**Course Registration**

- Auditing Courses
- Course Load Regulation
- Course Substitution
- Repeating Courses

**Learning Resources**

- Academic Regulations (p. 502)
  - > Attendance



- > Changing Grades
  - > Late Entry
  - > Readmission from Suspension
  - > Student Academic Integrity Policy
- Grading Policy (p. 503)

## College Life

- Student Code of Conduct
- Student Grievance Procedure

## Graduation (p. 509)

- Graduation Ceremony
- Graduation Ceremony Honors
- Graduation Process for Adult High School Diplomas
- Graduation Process for Certificates
- Graduation Process for Degrees & Diplomas
- Graduation Requirements

## Disclosure

Central Piedmont reserves the right to change its regulations, policies, procedures, fees, and programs without notice.

### Disclaimer: Please Note

Information in the catalog is verified as correct at the time of publishing. However, readers should be aware that programs, regulations, policies and other sources of information contained in the catalog are subject to change without notice. Central Piedmont students also may wish to contact their faculty advisor, program chair, or instructor for additional information.

## Institutional Equity

Central Piedmont is committed to equal opportunity and non-discrimination based on any legally protected classification, including race, color, national origin, religion, gender, sexual orientation, disability, age, genetic information, and political affiliation. The college does not discriminate in education or in employment. For more information about non-discrimination policies, review college policies or call 704.330.2722 ext 3534.

Central Piedmont provides access, equal opportunity and reasonable accommodation in services, programs, activities, education and employment for individuals with disabilities. Reasonable accommodations will be provided to individuals with disabilities upon request 10 business days in advance of the activity. To request accommodation, call 704.330.6631.

Students or employees who wish to report a concern or complaint relating to Title IX, sexual misconduct, may do so by reporting the concern to the College's Executive Director of Institutional Equity or the Deputy Coordinator assigned to their campus. Inquiries concerning the application of Title IX may also be referred to the college's Executive Director of Institutional Equity or to the U.S. Department of Education's Office for Civil Rights. Central Piedmont's Executive Director of Institutional Equity is Leon Matthews, whose office is in the Hall Building, Room 218. This office can be contacted by phone at 704.330.6524 or by email at [titleixcorrespondence@cpcc.edu](mailto:titleixcorrespondence@cpcc.edu).

Individuals with complaints of this nature also have the right to file a formal complaint with the United States Department of Education:

Washington D.C. (Metro)

Office for Civil Rights  
U.S. Department of Education  
400 Maryland Avenue, SW  
Washington, D.C. 20202-1475  
Telephone: 202.453.6020  
FAX: 202.453.6021; TDD: 800.877.8339  
Email: [OCR.DC@ed.gov](mailto:OCR.DC@ed.gov)  
Web: [ed.gov/ocr](http://ed.gov/ocr)

## Graduation and Transfer Rates

Graduation and transfer rates for Central Piedmont are available on the Consumer Information page of the Financial Aid & Veterans Affairs website under Student Outcomes.

## Open Door Policy

Central Piedmont has an open-door admission policy for applicants who are high school graduates or are at least 18 years of age and whose admission eligibility conforms to State Board of Community Colleges Code 1D SBCCC 400.2 and North Carolina Community College System directives. Admission to the College is open to any student who meets the age and graduation requirements without regard to race, creed, disability, national origin, gender, or age. Some degree programs have specific requirements for admission. These requirements are available from the division director or a program counselor.

## Safe College Statistics

Campus crime statistics are available for review at the campus security office on each campus, under College Safety on the College Security Services page of the college website or in the Student Handbook. (p. 494)

## Tuition

Tuition is set by the North Carolina State Board of Community Colleges and is subject to change without notice.

## Global Engagement

### Charlotte Regional Collaborative

A major community initiative is the Charlotte Regional Collaborative for a Global Workforce. Sixteen community colleges from 29 counties in both North and South Carolina come together to prepare, educate and train workers in the Charlotte region to be and remain competitive. Their work is jobs-driven and closely aligned with state, regional and local economic development efforts.

### Global Learning Office

The Global Learning Office (GLO) at Central Piedmont supports the global initiatives in which the college is involved. Student programs include:

- North Carolina Scholars of Global Distinction,
- the Global Issues Forums,
- international service-learning, and
- study-abroad travel programs.

The Global Learning Office is located in Room 303 of the Overcash Building on Central Campus. For more information, contact the Director of Global Learning at 704.330.6167 or visit the Global Learning Office website.

## History of the College

The history of Central Piedmont Community College (Central Piedmont) centers not so much on bricks and mortar, books and computers, or programs and classes, but points more to the many people who have played a role in developing the college and the many students who have found success as a result of their experiences.

Central Piedmont has provided educational opportunities since 1963, the year the North Carolina General Assembly passed the community college bill. Opening as a fully integrated institution, under the direction of Dr. Richard H. Hagemeyer, the founding president, the college combined the programs of the Central Industrial Education Center on Elizabeth Avenue and Mecklenburg College on Beatties Ford Road and sold its property on Beatties Ford Road to develop a campus around the old Central High School complex. Starting with 3.94 acres, the college bought surrounding property, demolished buildings and closed streets to build the beautiful, tree shaded, 32-acre Central Campus that students and faculty now enjoy.

From the start, the college was innovative in its teaching methods. Central Piedmont soon garnered national recognition for its individualized instruction and computer-assisted instruction. In 1970, the college was invited to join and help found the League for Innovation in the Community College, and today it is still an active member and member of the League for Innovation's Board of Directors. Central Piedmont has grown from a small college with a dozen programs serving 1,600 students to one with nearly 300 degree, diploma and certificate programs at six campuses and online with an array of credit and non-credit offerings.

After Dr. Hagemeyer's retirement in 1986, Dr. Ruth Shaw became the college's second president. Under her leadership, the college began a multi-campus plan that was actualized under the leadership of the college's third president, Dr. Tony Zeiss.

Now under the leadership of Dr. Kandi W. Deitemeyer, the college is the county's premier workforce development resource. Currently, Central Piedmont has launched a new strategic plan that maintains the college's fundamental commitment to student success while focusing on courageously responding to the region's economic opportunities. Central Piedmont works to enhance the lives and success of individuals and employers, making Mecklenburg County stronger and more prosperous.

For a more comprehensive review of the history of Central Piedmont Community College, consult the following resources:

Oleson-Briggs, S. (2013). *Central Piedmont Community College: Legacy and Promise 1993-2013*. Charlotte: CPCC Foundation, Inc.

Timblin, C. L. (1995). *Central Piedmont Community College: The First Thirty Years 1963-1993*. Charlotte: CPCC Foundation, Inc.

## Memberships, Professional Associations

Central Piedmont is a member of the following educational associations and agencies:

Accreditation Commission for Education in Nursing  
 Accreditation Council for Occupational Therapy Education (ACOTE)  
 Accreditation Review Council Surgical Technology and Surgical Assisting  
 Adult Education National Honor Society  
 AIGA, the Professional Association for Design  
 Alliance of Cardiovascular Professionals

American Association for Paralegal Education  
 American Association of Collegiate Registrars and Admissions Officers  
 American Association of Community Colleges  
 American Culinary Federation  
 American Heart Association  
 American Hotel & Lodging Education Institute (AHLEI)  
 American Institute of Architecture Students  
 American Occupational Therapy Association  
 American Production and Inventory Control Society  
 American Sign Language Honor Society  
 American Sign Language Teachers Association  
 American Society for Nondestructive Testing  
 American Society for Quality  
 American Society of Echocardiography  
 American Society of Health-System Pharmacists  
 American Society of Safety Professionals  
 American Welding Society  
 Area Chiefs and Directors  
 Arrowood Business Association  
 ASIS International  
 Association for General and Liberal Studies  
 Association for Student Conduct Administration  
 Association of America's Public Television Stations  
 Association of Builders and Contractors  
 Association of Certified Fraud Examiners  
 Association of College & University Auditors  
 Association of College and University Printers  
 Association of Community College Facility Operations  
 Association of Community College Trustees  
 Association of Nutrition and Foodservice Professionals  
 Association of Surgical Technologists  
 Association of Training and Development  
 ATIXA: The Association of Title IX Administrators  
 Blackboard Analytics Client Advisory Board  
 Business Continuity Planners Association  
 Campus Safety, Health and Environmental Management Association  
 Carolina Associated General Contractors  
 Carolina Clinical Education Consortium  
 Carolina Consortium  
 Carolina IT Professionals Group  
 Center City Partners  
 Center for the Advancement of Food Service (CAFE)  
 Charlotte Area Compensation Council, Inc.  
 Charlotte Area Society of Human Resource Management  
 Charlotte Chapter of the American Payroll Association  
 Charlotte Regional Business Alliance  
 Charlotte Regional Collaborative for a Global Economy  
 Charlotte Regional Visitors Association  
 Cisco Networking Academy  
 Club Managers Association of American Membership (CMAA)  
 Coalition of Community College Architecture Programs  
 College and University Personnel Association  
 College Board, The  
 College News Association of the Carolinas  
 College Transfer Program Association  
 COMBASE  
 Commission on Accreditation for Health Informatics and Information Management Education (CAHIIM)  
 Commission on Accreditation for Respiratory Care (CoARC)  
 Commission on Accreditation in Physical Therapy Education  
 Commission on Accreditation of Allied Health Education Programs

*About Central Piedmont*

Commission on Accreditation of Allied Health Education Programs-  
Cardiovascular Technology  
Commission on Accreditation of Ophthalmic Medical Programs  
Commission on Dental Accreditation  
Community Colleges for International Development, Inc.  
CompTIA  
CompTIA Authorized Academy Partner  
Conference of Interpreter Trainers  
Council for Advancement and Support of Education  
Council of Supply Chain Management Professionals  
Disaster Recovery Institute International—DRI International  
Economic Research Institute  
EDUCAUSE  
Enactus  
Financial Planning Association  
Flexographic Technical Association  
Gastonia City Sisters  
German Language and Culture Foundation  
Google Advisory Board – Educational Clients  
Health Occupation Students of America  
Hyland User Group  
Home Builders Association of Charlotte  
Hospitality Tourism Alliance  
Innovative Interfaces User Group  
In-Plant Printing and Mailing Association  
Institute of Internal Auditors, The  
Institute of Internal Controls  
Institute of International Education  
International Association of Campus Law Enforcement Administrators  
International Association of Conference Centers  
International Game Developers Association  
Journal of Business Continuity & Emergency Planning  
Lake Norman Chamber of Commerce  
League for Innovation in the Community College  
Learning Resources Network  
Lyrasis  
Major Market Group PBS Stations  
Manufacturing Institute  
Master Calendar  
Matthews Chamber of Commerce  
Mecklenburg County Volunteer Firemen's Association, Inc.  
Metrolina Association of Volunteer Administrators  
Metrolina Theatre Association  
Microsoft Imagine Academy  
Microsoft IT Academy  
Monterey Institute National Repository of Online Courses Network  
Mu Alpha Theta  
MyVA Community  
NAFSA: Association of International Educators  
National Academic Advising Association  
National Accrediting Agency for Clinical Laboratory Sciences (NAACLS)  
National Association for Community College Entrepreneurship  
National Association of ADA Coordinators  
National Association of Broadcasters  
National Association of College and University Business Officers  
National Association of College Auxiliary Services  
National Association of Colleges and Employers  
National Association of Educational Procurement  
National Association of Student Financial Aid Administrators  
National Association of the Deaf  
National Association of the Remodeling Industry  
National Association of the Remodeling Industry-Charlotte  
National Association of Veterans Administrators  
National Association of Women in Construction  
National Center for Construction Education and Research  
National Coalition of Advanced Technology Centers  
National Community College Council for Research and Planning  
National Cyberwatch Center  
National Educational Television Association  
National Institute for Staff and Organizational Development  
National Institute of Governmental Purchasing Inc  
National Institute of Metal Working Skills  
National Kitchen and Bath Association  
National League for Nursing  
National Organization for Associate Degree Nursing  
National Organization for Human Services  
National Registry of Interpreters for the Deaf  
National Restaurant Association  
National Student Employment Association  
National Technical Honor Society  
NC Live  
NC Real Estate Educators Association  
NC Tech  
North American Board for Certified Energy Practitioners  
North American Council of Automotive Teachers  
North Carolina Area Health Education Centers  
North Carolina Association of Campus Law Enforcement Administrators  
North Carolina Association of Colleges and Employers  
North Carolina Association of Community College Business Officers  
North Carolina Association of Community College Presidents  
North Carolina Association of Community College Trustees  
North Carolina Association of Developmental Education  
North Carolina Association of International Educators  
North Carolina Association of Respiratory Educators  
North Carolina Association of Surgical Technology Educators  
North Carolina Association of the Deaf  
North Carolina Association on Higher Education and Disability  
North Carolina Campus Compact  
North Carolina Community College Association of Distance Learning  
North Carolina Community College Chief Information Officer Association  
North Carolina Community College Cosmetology Instructors Association,  
The  
North Carolina Community College Institutional Information Processing  
System User's Group  
North Carolina Comprehensive Community College Student Government  
Association  
North Carolina Computer Instruction Association  
North Carolina Council of Resource Development, Inc.  
North Carolina Police Executives Association  
North Carolina Public Risk Management Association  
North Carolina Registry of Interpreters for the Deaf  
North Carolina Restaurant and Lodging Association  
North Carolina Sustainable Energy Association  
North Carolina Technology Association  
North Carolina Theatre Conference  
North Carolina Work-Based Learning Association  
Online Computer Library Center  
Online Learning Consortium  
Phi Theta Kappa  
Piedmont Culinary Guild (PCG)  
Printing Industry of the Carolinas, Inc., The  
Project Management Institute  
Psi Beta  
Public Media Business Association

Public Risk Management Association (PRIMA)  
 Risk and Insurance Management Society  
 Rotaract  
 Safety and Health Council of North Carolina  
 Sigma Chi Eta  
 Skills-USA Automotive  
 Society for College and University Planning  
 Southeastern Education Users Group  
 Southeastern Theatre Conference  
 Southern Association of Colleges and Schools Commission on Colleges  
 Southern Association of Colleges and University Business Officers  
 Southern Association of Colleges with Associate Degrees  
 Southern Association of Collegiate Registrars and Admissions Officers  
 Southern Association of Community, Junior, and Technical Colleges  
 Southern Organization for Human Services  
 SRA–Society of Research Administrators International  
 Tau Upsilon Alpha National Organization for Human Services Honor Society  
 U.S. Green Building Council  
 United States Institute of Theatre Technology  
 University City Chapter Chamber of Commerce  
 University Licensee Association  
 University Risk Management and Insurance Association  
 Visit Charlotte  
 VMware IT Academy  
 World Affairs Council of Charlotte  
 World at Work  
 World Safety Organization  
 World View

## Mission, Values, Goals

**Central Piedmont's future will be built on a well-defined set of mission, vision, and value statements that guide our every action.**

### Our Vision

Central Piedmont will be a champion of students, a catalyst for opportunity, and an exceptional provider of learning experiences that transform lives and strengthen community.

### Our Mission

To facilitate student learning, success, and completion, Central Piedmont provides exceptional education and globally competitive training in an engaging, supportive environment.

### Our Values

- **Student-Centered:** We are committed to students and learning. Student success is the heart of everything we do.
- **Collaboration:** We recognize the power of partnerships and effective communication and work collaboratively within our organization and externally in the Charlotte-Mecklenburg Community and beyond.
- **Excellence:** We strive to achieve excellence by recognizing opportunities, solving problems, and innovatively serving our students and community.

- **Accountability:** We demonstrate integrity, transparency, and effective use of resources by assessing our programs and services and using data to inform our decisions.
- **Equity:** We believe all individuals have the potential to succeed and we will provide student-focused pathways to achievement.
- **Courage:** We are passionate about our work. We are willing to acknowledge our strengths and weaknesses and confront challenges with intentionality.

## Our Strategic Goals

### Strategic Goal #1: Creating a Unified and Focused Vision for Student Success

Central Piedmont will create and communicate a cohesive vision to promote student success and implement targeted strategies to improve learning outcomes for all students.

- **Objective 1.1 – Student success**
  - Provide a unified definition of student success and consistent metrics of college-wide student success, including but not limited to completion, retention, and persistence rates
- **Objective 1.2 – Continuous Improvement**
  - Foster a culture of evidence, inquiry, and continuous improvement of educational programs and holistic, integrated student support strategies
- **Objective 1.3 – External Measures**
  - Meet or exceed the North Carolina Community College System, regional and program accreditors, and governmental student success measures
- **Objective 1.4 – Learning Outcomes**
  - Develop and assess learning outcomes and provide the results to faculty and staff

### Strategic Goal #2: Promoting Academic Excellence through Community Engagement and Partnerships

Central Piedmont will continuously refine programs to ensure that they are high-quality and relevant and provide support services that optimize career pathways and college transfer. This effort requires focused collaboration to align academic programs with relevant knowledge and skills needed to drive economic success.

- **Objective 2.1 - Pathways**
  - Promote successful student transitions from K-12 educational systems to Central Piedmont and then to employment and/or transfer
- **Objective 2.2 – Completion**
  - Cultivate and nurture relationships with university partners, business, and industry to promote student completion prior to transfer or entering the workforce
- **Objective 2.3 – External Relationships**
  - Cultivate and nurture external relationships to best assess academic programs and student support services for relevancy and their ability to maximize economic opportunities for students
- **Objective 2.4 – Economic Success**
  - Offer academic programs and services that prepare students to thrive in a local and global economy

### Strategic Goal #3: Advancing our Organizational Culture



Central Piedmont will recruit, develop, and retain a diverse, respectful, and responsible workforce who will foster an organizational culture of transparency and collaboration dedicated to mission-driven allocation of financial, physical, technological, and human resources.

- **Objective 3.1 – Employee Empowerment**
  - Empower employees to make intentional, collaborative, data-informed decisions regarding aligning resources to support student success
- **Objective 3.2 – Talent Development**
  - Create a clear standard of professional excellence, purposeful onboarding, and talent development that contributes to employee growth
- **Objective 3.3 – Strategic Stewardship of Financial and Facility Resources**
  - Apply strategic decision-making to ensure the most efficient and effective use of financial and facility resources to contribute to student success

#### **Strategic Goal #4: Making Equity a Priority**

Central Piedmont will make equity and inclusion intentional measures of college-wide student success by developing an understanding of achievement gaps and utilizing evidence-based practices to promote success for all students.

- **Objective 4.1 – Equity and Inclusion Awareness**
  - Increase college-wide awareness of performance and persistence for all students
- **Objective 4.2 – Achievement Gaps**
  - Make data-informed decisions to close achievement gaps and build pathways from non-credit to curriculum programs

#### **Strategic Goal #5: Telling Our Story**

Central Piedmont is a community asset for people of all backgrounds. We will expand efforts to position the College as the best choice for accessible, affordable, real-world education.

- **Objective 5.1 – Brand Launch**
  - Introduce the new logo, brand name, and website to the community
- **Objective 5.2 – Internal Communication**
  - Promote cross-functional teams to increase internal understanding of the roles and functions within the college
- **Objective 5.3 – External Communication**
  - Serve as brand ambassadors who increase awareness of the value of a post-secondary credential and the diverse, comprehensive offerings at Central Piedmont
- **Objective 5.4 – Leverage Supporters**
  - Provide alumni and community members opportunities to formally support the vision and mission of the College

# Enrollment



# Enrollment



## Quick Reference:

### Admission to the College

First Year Experience / Orientation (p. 61)

First Year Financial Aid (p. 58)

International Student Admission (p. 62)

### Admission to Programs of Study

Career and College Promise (high school enrollment) (p. 91)

College and Career Readiness Programs (p. 58)

College Credit Curriculum Programs (p. 58)

Corporate and Continuing Education (p. 59)

Program Changes (p. 59)

## College Admission

Central Piedmont follows an open door policy that welcomes all students without regard to color, creed, disability, race, national origin, or gender. Steps for admission vary, depending on the learning goals of each student. An admissions office is available on every campus. On Central Campus, it is in the second floor (ground floor) lobby of the Central High Building and can be reached by phone at: 704.330.6006.

Students may enroll throughout the year, but the college has **Admissions Priority Deadlines**. Use the deadlines to allow time to register for classes in the next upcoming term. Find updated deadlines and detailed information about admission processes on the Admissions, Records & Registration website. New college applicants are encouraged to contact the college early in order to complete enrollment steps before the class registration period begins.

**ENROLLMENT STEPS ARE FOUND AT** [cpcc.edu/getstarted](http://cpcc.edu/getstarted).

## Tuition and Fees

For complete information regarding costs to attend the college see the Tuition and Fees section of the catalog.

## First Year Experience (FYE)

The First Year Experience program provides support for new and returning students. The program is designed to help students get started, be comfortable on campus, and connect with student services. Find complete

information under First Year Experience / Orientation (p. 61) section of the catalog.

## First Year Advising

The Office of First Year Advising serves the academic and course needs of all first-time in college students. These services are available in Room 122 of the Central High Building on Central Campus or by calling 704.330.6454.

## First Year Financial Aid

The First Year Financial Aid Office helps students **create a personal education plan, evaluate costs and apply for financial assistance**. Visit the First Year Financial Aid office on Central Campus in Room 112 of the Central High building, or call 704.330.2722, ext 3671.

## Career and College Promise (high school enrollment)

Students currently enrolled in North Carolina high schools who want to take courses at Central Piedmont may call 704.330.6637 or visit the Career and College Promise website.

## College and Career Readiness Programs

Several programs are available to assist students in completing high school credentials or prepare for a successful transition into college level study or the workforce. Find complete information about these programs under these sections of the catalog:

Adult English as a Second Language (Adult ESL) (p. 92)

### High School Credentials

Adult High School Diploma (HSD) Program (p. 93)

### **High School Equivalency (HSE) Instruction**

High School Equivalency (HSE) Testing (p. 93)

### Workplace and Career Readiness

### **Accelerated Career Training (ACT)**

### **Career Development**

NC Works NextGen (p. 94)

Pathways to Careers (p. 94)

Rise 2 Work (p. 95)

Working in America

## Admission to Programs of Study

Admission to the College itself does not mean students are admitted immediately into a program with specified admissions requirements. All degree and diploma programs require high school graduation or its equivalent. The high school graduation requirement is considered to have been met by:

- Graduation from a high school recognized by the United States Department of Education (USDE)
- Graduation from a high school accredited by an accrediting organization recognized by the Council for Higher Education (CHEA)
- Graduation from a certified home school
- Possession of a High School Equivalency Diploma
- Possession of an Adult High School Diploma



## College Credit Curriculum Programs

### Non-Degree Students

Students who want to take college-level courses but do not plan to pursue a degree, diploma, or certificate should follow the enrollment steps for Non-Degree Seeking Students from Get Started on the college website.

### Degree-Seeking Students

All new students who plan to enter a degree, diploma, or certificate program for college-level credit need to follow the enrollment steps listed for College Credit from Get Started on the college website. Help in completing the enrollment steps is available through First Year Experience at 704.330.6100 or by emailing fye@cpcc.edu.

## Corporate and Continuing Education Programs

Students may choose non-degree courses and programs – from beginner to more advanced – for personal enrichment or career enhancement. Most continuing education courses and programs are open enrollment and do not require prerequisites, enrollment applications or transcripts. Registration is ongoing throughout each semester with registration dates and new classes typically announced in late April, early July and late November.

See the Corporate and Continuing Education section of the catalog or visit the Corporate and Continuing Education website.

## Program Changes

- **Students who want to change their program of study** must meet with the academic department offering the new desired program or with the Counseling and Advisement Office before registration begins. Veterans Affairs students must contact the Veterans Educational Benefits Office (VEBO) at Central Piedmont in Terrell Building on Central Campus before making any program changes.
- **Students receiving Financial Aid** should consult the Financial Aid office prior to making a program change to determine if the program change will affect their eligibility for financial aid.

## Campus Tours

Central Piedmont has six area campuses throughout Mecklenburg County. Each campus offers a selection of General Education and College Transfer classes, while some programs or classes are offered at a specific campus. Taking a tour of Central Piedmont is a great way to become familiar with the many academic programs and student services the college has to offer.

Walking tours are provided by Student Ambassadors and Enrollment and Student Services staff. Tours last approximately 45 minutes. On the Outreach and Recruitment website, sign up online for:

- individual campus tours on the Campus Tours web page or
- group campus tours on the Group Tours web page.

## Course Credit and Placement

### Credit by Examination

To receive credit by examination, a student must show convincing evidence of special aptitude or knowledge in the course material.

A written, oral, and/or performance examination is developed and administered by an instructor of the course. The examination is subject to the approval of the division director. If the student achieves satisfactory performance on the examination, a grade of "X" is recorded on the transcript. The "X" grade earns no quality points, but credit hours are given identical to the number of credit hours normally assigned to that course at Central Piedmont. For further information, see policy 5.02 Credit by examination.

Credit by examination is not covered by Financial Aid or Veterans Affairs.

### Course Credit Guidelines for Military Service

Central Piedmont approves academic credit for military basic training equivalent to specific physical education activity courses. Other military training that is deemed to be college level is evaluated and academic credit may be awarded when it is considered equivalent to specific course(s) in the North Carolina Community College System's Common Course Library. Documentation of the training must be presented to Student Records in the form of the student's original discharge papers (DD Form 214 - Member 4 copy) or an official military transcript.

### Course Substitution

Course substitutions are permitted with final approval by the Division Director of the academic area in which the substitution is sought. For students in Associate in Applied Science (A.A.S.) programs, substitution requests should originate with the advisor of the students' active program of study. For students in College Transfer programs [Associate in Arts (A.A.), Associate in Science (A.S.) and Associate in Fine Arts (A.F.A.)], requests should originate with the advisor of the related academic area.

Substitutions are approved and applied toward specific degrees, diplomas, or certificates; therefore, it is necessary for a student to be officially enrolled in the appropriate program of study and catalog year before a substitution can be given.

Students with questions about this process may consult with their faculty advisor or contact Counseling and Advisement Services at 704.330.6433. Veterans Affairs students are approved only by the North Carolina State Approving Agency for two course substitutions per program. For more information, go to Policy 5.12 Audits, Substitutions and Waivers.

### Course Waiver

Course waivers for graduation are permitted upon the recommendation of the division director of the student's Associate in Applied Science (A.A.S.) Degree program or the dean who has responsibility for the specific course in the Associate of Arts (A.A.), Associate of Science (A.S.). No credit hours are granted.

General Education requirements may not be waived for any reason.

For more information, go to Policy 5.12 Audits, Substitutions and Waivers.

## Advanced Placement Examination Course Credit Guidelines

Students must request that their official Advanced Placement Test results be sent to:

Office of Admissions  
Central Piedmont  
PO Box 35009  
Charlotte, NC 28235



Enrollment

The table below shows course credit that may be granted for specific exam results.

AP Examinations	Score Required	Hours Granted	College Courses Credited
Art History	3	3	ART 111
American (US) History	3	6	HIS 131 & HIS 132
Amer Politics	3	3	POL 120
Art Studio	0	0	No Credit
Drawing			
Biology	3	4	BIO 110 or BIO 111
Biology	5	8	BIO 111 and BIO 112
Calculus AB	3	4	MAT 271
Calculus BC	3	8	MAT 271 & MAT 272
Chemistry	3	4	CHM 151
Chemistry	4	8	CHM 151 and CHM 152
Comparitive Government & Politics	3	3	POL 210
Computer Science A	3	3	CIS 115
Computer Science AB	3	3	CSC 193
Computer Science Principles	3	3	CSC 122
English Language 3 & Composition		3	ENG 111
English Literature 3 & Composition		3	ENG 241
European History (3)		(6)	Do Not Offer (HIS 121, HIS 122)
French Language 3 & Culture (or Language, older version)		4	FRE 111/181
French Language 4 & Culture (or Language, older version)		8	FRE 112/182 and 211/281
French Language 5 & Culture (or Language, older version)		8	FRE 211/281 and 212/282
French Literature 3 (older version)		8	FRE 211/281 and 212/282
German Language & Culture (or Language, older version)		4	GER 111/181

German Language & Culture (or Language, older version)	4	8	GER 112/182 and 211/281
German Language & Culture (or Language, older version)	5	8	GER 211/281 and 212/282
German Literature (older version)	3	8	GER 211/281 and 212/282
Human Geography	3	3	GEO 111
Macroeconomics	3	3	ECO 252
Microeconomics	3	3	ECO 251
Music Listening/Literature (older version)	3	3	MUS 110
Music Theory	3	4	MUS 121
Physics 1	3	4	PHY 151
Physics 2	3	4	PHY 152
Physics B	3	8	PHY 151 and 152
Physics C: Electricity & Magnetism	3	4	PHY 252
Physics C: Mechanics	3	4	PHY 251
Psychology	3	3	PSY 150
Spanish Language & Culture (or Language, older version)	3	4	SPA 111/181
Spanish Language & Culture (or Language, older version)	4	8	SPA 112/182 and 211/281
Spanish Language & Culture (or Language, older version)	5	8	SPA 211/281 and 212/282
Statistics	3	4	MAT 152
United States Government & Politics	3	3	POL 120
United States History	3	6	HIS 131 and 132
World History	3	8	HIS 111 and 112

## International Baccalaureate Course Credit Guidelines

IB Exam	Score of 4		Score of 5		Score of 6 or 7	
	Cr. Hrs	CPC Courses	Cr. Hrs	CPC Courses	Cr. Hrs	CPC Courses
English HL		No Credit	6	ENG 111, ENG 113	6	ENG 111, ENG 113
Mathematical Studies SL		No Credit	3	MAT 165*	3	MAT 165*
Mathematical Studies SL		No Credit	4	MAT 271	4	MAT 271
Mathematical Studies HL		No Credit	8	MAT 271, MAT 272	8	MAT 271, MAT 272
Biology HL		No Credit	4	BIO 110 or BIO 111 or BIO 120	4	BIO 111, BIO 112 or BIO 120, BIO 130
Chemistry HL		No Credit	8	CHM 151, CHM 152	8	CHM 151, CHM 152
Geography HL		No Credit	3	GEO 111	3	GEO 111
The Americas HL		No Credit	6	HIS 131, HIS 132	6	HIS 131, HIS 132
Twentieth Century World		No Credit	3	HIS 165	3	HIS 165
French HL	4	FRE 112, FRE 182	8	FRE 112, FRE 182, FRE 211, FRE 281	12	FRE 112, FRE 182, FRE 211, FRE 281, FRE 212, FRE 282
German HL	4	GER 112, GER 182	8	GER 112, GER 182, GER 211, GER 281	12	GER 112, GER 182, GER 211, GER 281, GER 212, GER 282
Spanish HL	4	SPA 112, SPA 182	8	SPA 112, SPA 182, SPA 211, SPA 281	12	SPA 112, SPA 182, SPA 211, SPA 281, SPA 212, SPA 282
Economics HL		No Credit	6	ECO 251, ECO 252	6	ECO 251, ECO 252
Computer Studies		No Credit	4	CSC 120	4	CSC 120

Art & Design		No Credit		No Credit		No Credit
Psychology		No Credit	3	PSY 150	3	PSY 150

\* MAT165 Finite Math-in Common Course Library, not currently taught at Central Piedmont.

## Enrollment and Student Services Directors

Enrollment and Student Services Directors (ESS Directors) provide campus leadership to ensure efficient operation of Enrollment and Student Services functions on each campus. ESS Directors coordinate student services schedules, assist with campus-wide programming and serve as liaisons for student conduct and issues. Recommendations or concerns about student services on area campuses should be directed to the ESS Directors.

Area campus tours are coordinated by ESS Directors and are given with advance notice.

Future students are welcome to contact ESS Directors for general questions about services offered at area campuses:

### Cato Campus

Ezell Ellington, ESS Director  
704.330.4845

### Harper Campus

Erin Corbera, ESS Director  
704.330.4441

### Harris Campus

Howard Byrd, ESS Director  
704.330.4628

### Levine Campus

Reggie Pincham, ESS Director  
704.330.4207

### Merancas Campus

Andrea Abercrombie, ESS Director  
704.330.4175

For more information, visit the ESS Directors website.

## First Year Experience

The First Year Experience (FYE) program is designed to help students get started, become comfortable on campus, and connect with student services. Find First Year Experience online at [cpcc.edu/firstyear](http://cpcc.edu/firstyear) or contact FYE:

**By email:** [fye@cpcc.edu](mailto:fye@cpcc.edu)

**By phone:** 704.330.6100

### At campus offices:

On Cato Campus (Charlotte), Cato I Building, Room 230

On Central Campus (Charlotte), Central High Building, Room 110

On Levine Campus (Matthews), Levine I Building, Room 2100

First Year Experience offers the following services:

- General support and enrollment help for students (cpcc.edu/getstarted)
- Facilitation of orientation at all six CPCC campuses and online (cpcc.timetap.com/)
- FYE Peer Mentoring (cpcc.edu/firstyear/peer-mentors)
- Affordable Technology

## First Year Advising:

The Office of First Year Advising serves the academic and course needs of all first-time, college students. These services are available in Room 122 of the Central High Building on Central Campus or by calling 704.330.6454.

## First Year Financial Aid:

Funding an education is a major financial commitment for students and, perhaps, for their families as well. Central Piedmont's Financial Aid office encourages each student to apply for financial aid. The First Year Financial Aid office is dedicated to helping students and families plan for the future by helping to **create a personal education plan, evaluate costs, apply for financial assistance** and by providing **various types of financial support** such as, scholarships, grants and campus employment opportunities. Our goal is to make the college experience affordable.

The First Year Financial Aid office is located in the Central High Building on Central Campus in Room 112. Contact the FYE Financial Aid office by phone at 704.330.2722, ext. 3671.

## International Student Admission

Applications for international student enrollment at Central Piedmont are available

- in the Office of International Programs and Services located in the Central High Building, Room 101,
- by phone at 704.330.6838, or
- online at the International Services website.

## F-1 Visa students

F-1 Visa students should follow the enrollment steps for **F-1 Visa International Students** from Get Started on the Central Piedmont website.

1. **Evidence of English Competency:** A TOEFL score is not required to apply to Central Piedmont. However, in order to enter a college-level program, F-1 Visa students must meet the TOEFL, IELTS requirement, or complete the Academic English as a Second Language Program (EFL).
2. **Internet-based Test of English as a Foreign Language (iBT TOEFL) Test scores:** Reading 17; Listening 17; Speaking 16; and Writing 16.
3. **Academic International English Language Testing System (Academic IELTS) Test scores:** Reading 6.5; Listening 6.5; Speaking 6.5 and Writing 6.5. If any single score on either test falls below the minimum, the student is required to take, and complete, the Academic English as a Second Language (ESL) Program. Central Piedmont no longer accepts paper-based TOEFL (pBT) or Computer-based cBT TOEFL.

4. **Processing Fee:** A \$40 processing fee is required and must be submitted with the completed international student application.
5. **Medical Insurance:** Any international student (non-immigrant) who is admitted to Central Piedmont under an F-1 student visa must purchase medical insurance prior to registration each semester.

## Permanent Resident Aliens or Other Visa Holders

Alien registration card holders and others holding certain valid work visas are admitted to the College in the same manner as native citizens of the United States. Certain visa holders are not eligible to begin any course of study until they are able to obtain a visa that permits academic study. (Restrictions may apply to some visa types regarding residence classification for tuition purposes.)

## Undocumented Immigrants

The North Carolina Community College System advised in Memorandum CC10-026 (effective June 10, 2010) that community colleges should admit or enroll undocumented or illegal immigrants only as follows:

**Enrollment in Non-College Level Courses:** Undocumented immigrants may enroll in non-college level courses or programs including high school equivalency preparation courses, Foundational Skills, Adult High School, English as a Second Language and other continuing education courses less than college level.

**Enrollment in College-Level Courses:** Undocumented immigrants who are high school students may enroll in college-level courses consistent with the Career and College Promise policy. Participation in this program is not based on legal residence, but on attendance in a North Carolina high school. These courses are open to all high school students attending high school (public, private, or home school) located in the state who meet the eligibility criteria.

Undocumented immigrants must have attended and graduated from a United States public high school, private high school, or home school that operates in compliance with state and local law. Undocumented immigrants with a High School Equivalency diploma are not considered to be "graduated from a United States public high school, private high school, or home school" and therefore are not eligible to be admitted.

Undocumented or battered illegal immigrants who have been determined to meet one of the qualifying conditions in Federal Law, 8 USC Section 1641 are eligible for college-level courses. It is the applicant's responsibility to produce sufficient written documentation to satisfy the College that the applicant is eligible for post-secondary education benefits.

**Out-of-State Tuition Required:** Undocumented immigrants who are registered into a class are required to pay the out-of-state tuition rate. The College shall not enroll undocumented students into a class or program of study for which there are waiting lists, nor register undocumented students for classes until the conclusion of the last published (i.e. late) registration period.

## Contact information for international students:

**F-1 Visa Admissions:** 704.330.6838; International Programs & Services, Room 101, Central High Bldg.

**Other Visas:** 704.330.6006; Admissions, Room 227, Central High Building, Central Campus

**Permanent Resident:** 704.330.6006; Admissions, Room 227, Central High Building, Central Campus

**Limited English Proficiency/Adult ESL Testing:** 704.330.6172; Adult ESL, Room 200, Kratt Hall, Central Campus

**Academic ESL Testing:** 704.330.6914; Testing Center, Room 248, Central High Bldg., Central Campus

Academic ESL Program: 704.330.6914; Foreign Languages & Academic ESL Division, Room 123, Sloan-Morgan Building, Central Campus

## Student Educational Records / FERPA

The college maintains the position that students' records are their own property; therefore, this information, with certain exceptions defined below, is released only when a student signs a Student Information Release Authorization Form in the Student Records Office. Students may have copies of their transcripts sent to any institutions or individuals they choose and may also order copies for their own use. A \$5 fee is required for each official transcript requested. Transcripts are not released if the student owes money to the College. Transcripts may be ordered online through a student's MyCollege account, in person in the Student Records Office, or at the Admissions, Registration and Records desk at any campus.

### Policies and Procedures

The college policy on access to and release of student information is available to students, faculty and staff. It is available in the online Student Handbook and in this catalog. For more information, go to Policy 7.02 Student Records (Transcripts).

### Annual Notice to Students of Their Rights Under Family Educational Rights and Privacy Act of 1974 (FERPA)

Central Piedmont, in fulfilling its responsibilities to students, must maintain accurate and confidential student records. The college staff recognizes the rights of students to have access to their academic and personal records in accord with existing College policy and FERPA - Family Educational Rights and Privacy Act of 1974 (Buckley Amendment).

### Definition of Term "Educational Records"

Educational records, as defined under the provisions of the Family Educational Rights and Privacy Act of 1974, include files, documents and other materials which contain information directly related to students and which are maintained by an educational institution or by an authority on behalf of the institution. The term "educational record", under the provisions of the law, does not include the following:

1. Records of institutional, supervisory and administrative personnel which are the sole possession of the maker and are not accessible or revealed to any other person except a substitute for the above named personnel
2. Records and documents of Security Officers of the institution which are kept apart from such educational records
3. Records on students which are made or maintained by a physician, psychiatrist, psychologist, counselor, or other recognized professional or paraprofessional acting in their official capacity and which are made, maintained, or used only in connection with a provision for treatment for the student and are not available to anyone other than

the persons providing such treatment, except that such records can be personally reviewed by a physician or other appropriate professional of a given student's choice

4. Financial records of the parents of the students or other information therein contained
5. Confidential recommendations if a given student has signed a waiver of the student's rights of access, provided such a waiver may not be required of the student
6. Confidential letters or statements of recommendation which were placed in educational records prior to January 1, 1975, if such records or statements are not used for purposes other than those for which they were specifically intended
7. Medical records, physical examination results, reasonable accommodation request forms, or other medical information which are required to be kept apart from general educational records and treated as confidential in accordance with the Rehabilitation Act of 1973 and the Americans with Disabilities Act

### Control Provisions on Student Records and Student Information

1. Transcripts and other educational records information are released only with written permission of the student. When information other than the transcript is released from the student's official record (Student Records Office), the student will receive a copy of the release.
2. Students have the right to inspect their own records whether recorded in hard copy form or recorded in the form of magnetic disks and microfilm. Upon inspection, students are entitled to an explanation of any information contained in their records.
3. The official student file will not be sent outside the Counseling Office, Student Records Office, Admissions and Registration Services, Graduation Office, Financial Aid Office, Veteran and Military Affairs Office, or other custodial offices except in circumstances specifically authorized by the Associate Dean of Graduation and Records. The authorization for such special circumstances must be in writing.
4. All medical records, physical examination results, reasonable accommodation request forms, or other medical information must be collected on separate forms, maintained in separate medical files kept apart from a student's general educational records and treated as confidential. Disclosure of such information may only be made at the express, written consent of the student to the following:
  - a. Administrators, Department Heads and others involved in a request for reasonable accommodation or evaluation of qualifications for or performance in a course, program, service or activity
  - b. Department Heads and instructors for purposes of implementing and enforcing necessary restrictions and accommodations
  - c. First aid and safety personnel if a known disability may require emergency treatment

### Release of Student Educational Records

1. Requests for protected information shall not be honored without proper written consent by the student via a Student Information Release Authorization Form for the release of such records except under conditions indicated in paragraphs 2 and 5 below.
  - a. The written consent must specify the records or the specific data to be released, to whom they are to be released and the reasons for release.



- b. Each request for consent must be specific and each request must be handled separately.
2. Request for confidential information will be honored without prior consent of the student in connection with an emergency, if the knowledge of such information by appropriate persons is necessary (in view of a reasonable College Policies and Procedures person) to protect the health or safety of the student or other persons. However, such a release shall have the approval of a Cabinet Officer unless it can be shown that, under the circumstances, time would not permit or that no Cabinet Officer was available.
3. The following "Directory Information" may be made available to the public by the college unless students notify the Associate Dean of Graduation and Records in writing, by the third week of the semester, that such information concerning themselves is not to be made available:
  - a. Student's name and hometown
  - b. Major field of study or program
  - c. Dates of attendance, degrees, diplomas or awards
4. Information other than "Directory Information": Any release of student information for public use or use by the media, except that designated above (paragraph 3), must have prior written approval by the students involved.
5. Disclosure to Government Agencies: Properly identified and authorized representatives of, or bona fide written requests from, the Comptroller General of the United States, the Department of Education, the Attorney General of the United States, as well as state and local educational authorities may have access to student or other records in connection with the audit and evaluation of federal or state supported educational programs, in connection with the enforcement of federal or legal requirements related to such programs or for the purpose of military recruiting (Solomon Amendment). Routine requests for student data from such agencies as DEO, OEO, research agencies and state reporting agencies may be honored without prior approval of the student only in formats where students are not identified.
6. Faculty and administrative officers of the college who demonstrate a legitimate educational need will be permitted to view student data for a particular student.
7. Confidential information requested by other than federal or state agencies, as specified in paragraph 5 above, will be released only under the following conditions:
  - a. An official order of a court of competent jurisdiction
  - b. Subpoena (Students will be notified immediately by registered mail that their records are being subpoenaed.)

## Students' Rights to Question Content of Their Official Student Files

1. Students have the right to review their official records maintained by the college. Furthermore, students may question any inaccurate or misleading information and request correction or deletion of such data from their files.
2. All such requests will be sent to the Associate Dean of Graduation and Records and will become a part of that student's file.
3. All requests for correction of a student file will be acted upon within 45 work days of receipt of the request. If the custodian can verify that such data are, in fact, in error, appropriate corrections will be made and the student will be notified in writing when the correction has been completed. If an error cannot be readily substantiated, the request will be referred to an Ad Hoc Hearing Committee appointed by the Vice

President for Enrollment and Student Services. After a student has had the opportunity to present the case to the hearing committee, the committee will render a decision in writing stating the reasons for its decision. If the decision is in agreement with the student's request, the student will be permitted to review the file to verify that the change has been made correctly. If the student's request is denied, the student will be permitted to append a statement to the record in question, showing the basis for the disagreement with the denial. Such additions will become a permanent part of the record.

## Testing and Assessment Centers

Testing and Assessment Centers on four CPCC campuses support the learning process by serving students, faculty and community testing needs. The centers administer a wide variety of tests for instructional placement, course, distance learning, certification, licensure and other specialized purposes. Physically attractive atmospheres and a low-key method of operation are designed to help reduce test anxiety. The Testing and Assessment website provides hours of operation, placement test schedule, test-taking strategies, practice placement tests, placement test review videos, and additional testing information.

### Testing Rules

- Fees may apply for certain testing services.
- A photo ID is required for all testing services.
- As a courtesy to others and for security purposes, students are required to turn off and put away all electronic equipment such as tablets and cell phones before entering testing areas.
- The Testing Centers cannot accommodate children.

### Hours of Operation

The Central Campus Testing Center is open Monday through Thursday from 8 a.m. until 6 p.m. The last course test is given at 5:30 p.m. On Friday, the Center is open from 8 a.m. until 4:30 p.m. and the last course test is given at 3:30 p.m. Hours are subject to change.

To see hours at all campus locations, to schedule a placement test, or to learn about other testing services, contact the Testing Center

- online at the Testing and Assessment website
- by email at [testingcenter@cpcc.edu](mailto:testingcenter@cpcc.edu), or
- by phone at 704.330.6886.

## College-Level Examination Program (CLEP)

Central Piedmont Community College is a national test center for administering computer-based CLEP exams. CPCC students, as well as the general public, may take CLEP exams. The examinations are administered by appointment at the Central Campus Testing Center in Room 248 of the Central High Building. Advance registration is required. Applicants may register online on the Testing and Assessment Center website or call 704.330.6886 for additional information.

CPCC students who perform satisfactorily on CLEP exams receive a grade of "X." The "X" grade carries no quality points, but credit hours are awarded identical to the number normally assigned to that course at CPCC. Each academic department is responsible for determining the maximum amount of CLEP credit awarded within its own program(s).

CLEP credit is based on the policy in place at the time the exam is completed. Students are encouraged to verify all CLEP requirements, including transferability, prior to taking a CLEP exam. CLEP fees and policies are subject to change.

Central Piedmont Community College grants CLEP credit according to the following guidelines:

Examination	Credit Granting Score	Credits Granted* (Sem. Hrs.)	Equivalent CPCC Course(s)
Accounting, Financial	50	4	ACC 120
Algebra, College	50	4	MAT 171
American Government	50	3	POL 120
American Literature	50	6	ENG 231, ENG 232
Biology**	50	4	BIO 110
Business Law, Introductory	50	3	BUS 115
Calculus	50	4	MAT 271
Chemistry***	50	4	CHM 151
College Composition	50	3	ENG 111
College Mathematics	50	3	MAT 110
English Literature	50	6	ENG 241, ENG 242
French, Level I	50	6	FRE 111, FRE 112
French, Level II	59	12	FRE 111, FRE 112 & FRE 211, FRE 212
German, Level I	50	6	GER 111, GER 112
German, Level II	60	12	GER 111, GER 112 & GER 211, GER 212
History of the U.S. I: Early Colonization to 1877	50	3	HIS 131
History of the U.S. II: 1865 to the Present	50	3	HIS 132
Human Growth and Development	50	3	PSY 241
Humanities	50	6	HUM 211, HUM 212
Macroeconomics, Principles of	50	3	ECO 252
Management, Principles of	50	3	BUS 137
Marketing, Principles of	50	3	MKT 120

Microeconomics, Principles of	50	3	ECO 251
Natural Sciences	50	3	PHY 110
Precalculus	50	4	MAT 175
Psychology, Introductory	50	3	PSY 150
Sociology, Introductory	50	3	SOC 210
Spanish, Level I	50	6	SPA 111, SPA 112
Spanish, Level II	63	12	SPA 111, SPA 112 & SPA 211, SPA 212

- \* Recommended by the American Council on Education (ACE)
- \*\* Subject to satisfactory performance in any other laboratory science course at CPCC
- \*\*\* Subject to completion of CHM 152 with a minimum grade of "C"

## Transcript Evaluation Process

### US Institutions

Enrolling students must request institutions they have previously attended to send official Transcript(s) to Central Piedmont. Central Piedmont accepts electronic transcripts through secure transcript providers such as CFNC, Parchment, eScrip, Scribbles and the National Clearinghouse. Select Central Piedmont in the recipient drop-down field when applicable. Official paper transcripts mailed to Central Piedmont should be sent to the following address:

Student Records  
 Central Piedmont Community College  
 P.O. Box 35009  
 Charlotte, NC 28235-5009

After official college transcripts are received in Student Records, they are evaluated automatically by the Transcript Evaluation Department. Students are notified by email when their evaluations have been completed. Previous courses completed with a grade of "C" or higher from regionally accredited institutions that match Central Piedmont courses are transferred for credit. To see courses accepted for transfer, students should:

1. Log into their MyCollege account,
2. Select **Transcript** from the **Academic Profile** menu,
3. Select "CB" for Combined CU/CE Transcript, and
4. Submit.

### International Institutions

Students are advised to submit their record of courses to an agency recognized by the National Association of Credential Evaluating Services (NACES) for an international evaluation. Letter grades ("A," "B" or "C") and earned credit hours must be provided for each course. Course equivalencies based on "Pass" or "Satisfactory" completion are not accepted.

## Enrollment

Send certified transcript copies with English translations and their international evaluations to:

Student Records  
Central Piedmont Community College  
P.O. Box 35009  
Charlotte, NC 28235-5009

After an official international college transcript evaluation is received in Student Records, it automatically will be evaluated by the Transcript Evaluation Department. Students are notified by email when their evaluation has been completed. Previous courses completed with a grade of "C" or higher from regionally accredited institutions that match Central Piedmont courses are transferable. To see courses accepted for transfer, students should:

1. Log into their MyCollege account,
2. Select **Transcript** from the **Academic Profile** menu,
3. Select "CB" for Combined CU/CE Transcript, and
4. Submit.

**Note:** In most cases, students are not required to wait until their evaluation is completed in order to register for classes. When completion of prerequisite courses is necessary to register for courses, student counselors, academic advisors, faculty advisors, and division directors can review students' transcripts to verify successful completion of the required prerequisite course(s) and grant course permission. This is not a substitution for an official evaluation.

## Tuition and Fees

### Quick Reference:

Tuition (p. 66)  
Fees (p. 66)  
Refund Policy (p. 67)  
Sponsored Programs (p. 67)  
Student Insurance (p. 67)

Tuition and fees are subject to change without notice.

**NOTE: Registration automatically is canceled if payment is not made by the published due dates for the following:**

- **tuition**
- **required fees (student publications/activity fees, technology fees, lab fees and CAPS fees)**
- **student accident and student professional liability insurance fees**
- **GED Testing fees**

Cash, checks, money orders, and credit cards (MasterCard, American Express, Visa or Discover Card) are accepted.

## Tuition

### Tuition Rates for In-State students

#### Curriculum Courses

Fewer than 16 semester hours: **\$76** per credit hour.  
16 semester hours or more: **\$1,216** per semester.

### High School Diploma or High School Equivalency Courses

No tuition or fee.

### Tuition Rates for Out-of-State students

#### Curriculum courses

Fewer than 16 semester hours: **\$268** per credit hour.  
16 semester hours or more: **\$4,288** per semester.

### High School Diploma or High School Equivalency Courses

No tuition or fee.

## North Carolina Residence Status

**For students enrolling in college credit curriculum classes**, an initial residence classification is made by Residency Determination Services (RDS) upon application to the college. It is the student's responsibility to supply documenting evidence of residence status, if requested. The decision is based on the preponderance of the evidence presented.

**NOTE: The out-of-state tuition rate is charged automatically to students for whom North Carolina residence has not been established.**

*Information provided here is not intended to be comprehensive. The residence policy is based on North Carolina General Statute 116-143.1. More information can be located at [ncresidency.org](http://ncresidency.org).*

## Fees

### Applied Music Study Fee

A fee of \$200 is charged for applied music classes.

### Campus Access Parking and Security (CAPS) Fee

The Campus Access, Parking and Security Fee (CAPS Fee) is charged to college credit curriculum and continuing education students who attend classes at any college campus. Revenues collected from this fee are used to pay costs of campus security and parking lot rental and maintenance at all Central Piedmont campuses and centers.

**\$73** per semester for **curriculum students** enrolled in **eight semester hours or less**  
**\$97** per semester for **curriculum students** enrolled in **nine semester hours or more**  
**\$12** per class for **Corporate and Continuing Education** students.

For complete details, visit the CAPS fee website.

### Corporate and Continuing Education

Fees are published per class.

### Forensics Fee

A fee of \$50 per class is charged for forensics courses.

### GED and High School Equivalency Tests

The GED (General Educational Development) Test consists of four sub-tests for \$80 or \$20 per sub-test.

The HiSET (High School Equivalency Test) contains five sub-tests for \$50 or \$15 per sub-test.

## Lab Fees

**Curriculum Lab Fees:** \$27 per lab hour with \$216 maximum

**Occupational Extension Lab Fees:** \$27 per lab with \$216 maximum

The term 'lab hours' includes both lab and clinical hours. Lab fees are used to provide supplies and equipment in the respective programs.

## Student Publications/Activity Fee

**\$26** per semester for 1 to 8 credit hours

**\$35** per semester for 9 or more credit hours

Maximum fee is \$35 per semester

The Student Publications/Activity Fee is used to support the Student Life Center and many co-curricular and extra-curricular programs. Among these are student government, student publications, clubs and organizations, intramural sports, educational activities, speakers and entertainers.

## Technology Fees

A technology fee of \$48 is charged per term for college credit curriculum classes, and a technology fee of \$5 is charged for occupational extension classes.

## Inclusive Access Fees

Inclusive Access fees are required for specific courses for online course materials. The fees are subject to change.

The Business (BUS-110) inclusive access fee is \$107.25.

The Economics (ECO-251 and ECO-252) inclusive access fee is \$124.18.

The Music (MUS-110) inclusive access fee is \$83.92.

The Art (ART-111) inclusive access fee is \$75.02.

The Academic Related Courses (ACA-122) inclusive access fee is \$29.49.

## Returned Check Policy

All **returned checks** are subject to a processing fee of \$25. This fee also applies to **credit card payments not accepted** and returned by a financial institution. This fee, along with the original amount of the check or credit card, is due within five (5) business days after official notification from the college. These amounts are payable only by cash or money order at the Cashiering/Business Office on any campus. A hold is placed on all student records until acceptable payment is received.

## Refund Policy

The North Carolina Community College System establishes the refund policy which is subject to change.

### Refunds for College Credit Curriculum Courses

- A 100 percent tuition refund is paid by the college to students who officially withdraw from class prior to the first day of the academic term.

- A 75 percent tuition refund is paid by the college to students who officially withdraw from class prior to or on the 10 percent point of the semester.
- All curriculum student refunds are issued to students' BankMobile accounts or to the credit card used for tuition payment. During BankMobile activation, students may opt to receive refunds by electronic deposit to a personal bank account or through BankMobile's Vibe account.

### Refunds for Corporate and Continuing Education - Occupational Extension Courses

- A 100 percent tuition refund is paid by the college to students who officially withdraw from class prior to the first day of the class.
- A 75 percent tuition refund is paid by the college to student who officially withdraw from class on or after the first day of the class through the 10 percent point of the class.
- All Corporate and Continuing Education refunds are issued by check or to the credit card used for tuition payment.

### Refunds for Corporate and Continuing Education - Self-Supporting Courses

- A 100 percent refund is paid by the college to students who officially withdraw from class prior to the first day of the class.
- All Corporate and Continuing Education refunds are issued by check or to the credit card used for tuition payment.

## Refunds for Fees

Student fees are nonrefundable for curriculum and Corporate and Continuing Education courses, unless the course is canceled by the college or dropped before the first day of the academic semester. Fees are not refunded after the term begins, including during the 75 percent refund period. This policy applies to all student fees, including student activity fees, lab fees, technology fees, CAPS fees, and student insurance.

## Cancellations / No Shows

The college reserves the right to cancel classes at any time without prior notice. Tuition is refunded 100 percent for any class canceled by the college. NOTE: Students who do not cancel and do not attend are still responsible for payment.

## Sponsored Programs

Sponsored students must submit a letter of authorization to bill along with their registration information to the Sponsored Programs office or to any Cashiering/Business Office on a Central Piedmont campus before they register, but no later than the same day they register for classes. For further information, visit the Sponsored Programs web page or call the Sponsored Programs office at 704.330.4262.

## Student Insurance

Insurance coverage is available to students through Central Piedmont on the Student Insurance web page.

### Student Accident Insurance Plan

Student Accident Insurance is required for specific classes and is billed at the time of registration. The plan insures students against loss resulting from accidental bodily injury sustained while



participating in or attending specific classes. For detailed, current coverage information, visit the website above. For more information, contact the office of Enterprise Risk Management at 704.330.6684.

### **Medical Hospitalization Group Plan**

The plan is available to students enrolled for six or more credit hours. The group plan offers several benefit options, depending on the needs of the student. Premiums vary per term or year, depending on the selected coverage and payment schedule. Spouses and unmarried children may be covered for an additional fee. Plans are a direct relationship between the student and the insurance provider. Qualified students may contact the insurance provider directly through the website above.

# Student Services



# Student Services



Central Piedmont provides services and resources to help students reach their full potential. Select menu options on the left side of this page under Student Services to see complete details about each of them.

## Administrative Support

Central Piedmont administration provides effective leadership by setting the tone and direction for the college and by granting employees the authority and resources to carry out their duties. The college efficiently and effectively expends its resources and is committed to maintaining a leadership role in its use of personnel and facilities. These administrative processes allow the college to focus on its primary mission of providing the highest quality educational programs and services.

## Community Service

Service to the Charlotte-Mecklenburg community has long been one of the core values of Central Piedmont. The college offers a wide range of high-quality speakers and cultural and artistic events presented in state-of-the-art performance venues.

Additionally, the college has a Service-Learning Center whose mission is to promote civic engagement and develop a culture of service among students, faculty, and staff. This program supports the efforts of hundreds of local agencies and assists our students in becoming more engaged citizens and learners.

## Enrollment and Student Services

Enrollment and Student Services (ESS) is committed to providing quality educational support to facilitate student success for a diverse student population. Services provided include first-year experience support, recruitment, enrollment, financial aid, graduation, academic advising and tutoring, career and personal counseling, disability services, international services, student conduct, security services, student activities, testing, and veterans' services. Another available student support connects students to benefit services and food pantries. ESS collaborates with Learning units to support comprehensive student-centered initiatives.

## International Programs and Services

International Programs and Services is committed to supporting the academic and personal growth of international students at Central

Piedmont. Students from around the world can attend Central Piedmont to study intensive English or a degree, certificate, or diploma program. With more than 400 students studying at Central Piedmont on a student visa, Central Piedmont continues to recognize the importance of preparing students to be globally competitive with the international knowledge necessary to build and maintain a healthy, globally competitive economy in the Charlotte region.

## College Security Services

College Security and Police Officers are here to help. No matter what kind of situation arises at the College, the 24-hour Security and Police Dispatch Center at Central Piedmont, located in the Drumm Facilities Services Building on Central Campus, is the first step toward resolving safety issues. As soon as a call for assistance is received, a radio call goes out to the nearest security or police officer. Additional resources such as Emergency Medical Services (EMS), Fire and Municipal Police also are immediately dispatched, based on the incident.

- For emergencies, or immediate assistance, dial 704.330.6911.
- For non-emergencies, dial 704.330.6632.
- For parking assistance, dial 704.330.6117.
- For a security tip, send a text message to 67283. Start the message with **CPCCTIP**, then include the tip.

The college seeks to promote a teaching and learning environment that is safe for all students, faculty, staff and visitors while on the premises. Contributing to the safety of the teaching and learning environment are: controlled access to facilities and distribution of keys, the presence of both sworn law enforcement officers and security officers, and a heightened awareness of criminal activity through regular reporting and educational programs. Within these measures, the college complies with all crime awareness education and reporting requirements of the Jeanne Clery Disclosure of Campus Security Policy and Campus Crime Statistics Act. The *Annual Security Report* contains important information about safety, security, and crime statistics at Central Piedmont. It is available on the College Security Services website.

## Counseling and Advisement

### Counseling and Advisement Services

Counselors and Academic Advisors provide numerous services for students, including:

- Academic advising for new and returning students without an assigned Faculty Advisor in their program of study
- Advising for students in pre-nursing/pre-health careers programs
- Academic counseling for students in meeting their educational goals
- Personal counseling, crisis interventions and referrals
- Workshops, presentations, and events focusing on academic success, healthy relationships, mental health and emotional well-being

Counseling and Advisement on Central Campus can be reached at 704.330.6433 or at **Student Success Services** in Room 365 of the Central High Building. The iCAN website gives locations for Counseling and Advisement services on each Central Piedmont campus.

## Student Success Center

The Student Success Center helps connect students with resources throughout the college. It is located on the third floor of the Central High



Building on Central Campus for face-to-face information or assistance. For information by phone, call 704.330.6433.

## iCAN - Integrated Counseling and Advising Network

Counseling and advising at Central Piedmont are integral to the College's mission, which includes educating students for life. Therefore, the college is committed to a process that is effective, caring, supportive and accessible to all students. To foster total student development, Central Piedmont operates a comprehensive counseling and advisement system that brings together the expertise of counselors, academic advisors, faculty and other staff from around the college. Assistance is provided in the following areas:

- academic, personal and career counseling
- academic assessment and advisement
- guidance in the transition from high school to college
- guidance in the transition from Central Piedmont to a four-year college or university

Partners working together within the iCAN system are described below:

**Academic Advisors** provide professional guidance for students as they begin their journey at the college. By talking with an advisor, students receive:

- recommendations about appropriate course placement and selection
- explanations of institutional policies and procedures
- assistance identifying strategies for success
- assistance in developing individualized educational plans

Advisors work with students during periods of transition, providing help when students re-enter college after time away or when they want to change their program of study.

**Counselors** serve as an integral part of the teaching and learning process. In addition to providing academic advisement, counselors assist students in exploring alternatives, developing goals, learning new strategies and designing a specialized academic success plan for goal achievement. Through the Personal Counseling Assistance Program (PCAP), counselors offer free, confidential and professional counseling to students facing personal concerns that may hinder their academic progress or general well-being. Medical or agency referrals are provided when appropriate. Students are encouraged to schedule appointments, but walk-in times are available. Learn more by visiting PCAP online or call 704.330.6433.

In their role as **Faculty Advisors**, instructors contribute to student success by assisting with program planning, course selection, scheduling and academic guidance. Faculty Advisors also help students connect with a variety of college and community resources.

**Transfer Resource Center Advisors** are dedicated to assisting students who wish to transfer to four-year colleges or universities. They help students in reviewing college options, setting goals, navigating admissions processes and other activities to facilitate the transfer process. Transfer Advisors work with students to select the best course options based on their intended transfer major and institution.

The **Virtual Office of Counseling and Advisement Services** provides online assistance. On the iCAN website, students can discuss specific

advising issues with an advisor or counselor by logging into the iCAN Chat - Live Help.

By helping students maximize resources, services and other means of support, the iCAN system creates opportunities for improved self-understanding and facilitates achievement of educational, career and life goals. The iCAN promotes student success by *helping students help themselves*.

**To schedule an appointment for any of these services, check hours of operation, or find more information, call 704.330.6433 or visit online at [cpcc.edu/ican](http://cpcc.edu/ican).**

## Disability Services

The Disability Services office at Central Piedmont provides academic accommodations and auxiliary aids or assistive technology to students with documented disabilities as specified under the American with Disabilities Act of 1990 (and Amendments Act of 2008) and Section 504 of the Rehabilitation Act of 1973. It is the mission of Disability Services to ensure that Central Piedmont students with disabilities have equal access to educational opportunities. Believing that individuals are better able to advocate for their needs with greater success, efforts are made to empower students with self-advocacy skills at every step.

To request services, students with disabilities must self-identify at Disability Services and provide appropriate documentation. The Disability Services Department is located in Suite 331 in Central High building on Central Campus. Visit [cpcc.edu/disabilities](http://cpcc.edu/disabilities) or call 704.330.6621/ TTY 704.330.6230 to learn more.

## Disability Documentation

Students requesting accommodations are asked to submit appropriate documentation to Disability Services.

**Primary elements of documentation** are:

- 1) diagnosis of a disabling condition, and
- 2) the nature, severity and functional limitations of the disability.

The type of documentation requested varies according to the disability. Examples include, but are not limited to:

- comprehensive psychological evaluations
- vocational rehabilitation evaluations
- medical documents from a physician

There are times when documentation submitted does not provide adequate information for the primary elements mentioned above. In such cases, Disability Services may request additional documentation.

## Procedures for Services and Academic Accommodations

When Disability Services has received and reviewed a student's documentation, the office contacts students through their Central Piedmont email accounts to set up an intake meeting with a Disability Services counselor. At the meeting, the counselor explains Disability Services procedures and guidelines, discusses accommodations and completes any forms that might be necessary.

In order to guarantee timely accommodations, **students must meet with an assigned Disability Services counselor prior to the start of the semester**. The counselor completes an Accommodations Form for each class, based on approved accommodations. **New Accommodations**



### **Forms must be completed each semester the student is enrolled.**

Approved classroom/testing accommodations are not effective until Accommodation Forms are signed by the counselor and student. The Accommodation Forms must be delivered by the student and signed by his/her instructor(s).

## **Interpreting Services**

For students who are deaf/hard of hearing, interpreting services are among the most critical components in educational programming. The success of a student's educational experience is dependent on the quality and availability of interpreting services. The College employs qualified, certified, and licensed interpreters skilled in using American Sign Language, who function as a communication channel among the student, instructor and classmates. Students are referred for interpreting services by a Disability Services counselor. At times, an adjustment to class scheduling is necessary in order to coordinate interpreting services. Deaf/hard of hearing students may request interpreting services for any College-sponsored program or activity.

## **Counseling Services**

In conjunction with other Central Piedmont counselors, Disability Services counselors can assist students in many capacities, including, but not limited to, providing referrals (within Central Piedmont and in the community), advocating for students, providing academic accommodations and offering support to students. Disability Services counselors also facilitate for faculty and staff appropriate provisions for accommodations to students with disabilities.

## **Tutorial Services**

Tutoring is not an accommodation in post-secondary institutions. However, Central Piedmont offers tutoring services to all students as a tool for enhancing success. Disability Services counselors may refer students to the Academic Learning Center and/or the office of Student Support Services (TRiO), but it is ultimately the student's responsibility to pursue tutoring services.

## **Confidentiality**

In accordance with requirements of the Federal Family Education Rights and Privacy Act (FERPA), Disability Services protects students' right to privacy by limiting access to disability records. Unless a student signs and dates the *Consent to Release Information* form, Disability Services will not disclose any information to a student's parents/guardian/family members. Information concerning a student's disability is treated confidentially and is only shared with College staff and faculty who have a legitimate educational interest. It is primarily the student's responsibility to share this information when necessary and/or advisable.

## **Grievance Procedure**

### **To appeal the denial of a requested accommodation, students should follow these steps:**

1. Students who believe they are not reasonably accommodated by their approved accommodation should first discuss their concern with their Disability Services counselor.
2. Any students not satisfied with the outcome after meeting with their Disability Services counselor may request a second meeting with the Director of Disability Services.

3. The Director of Disability Services then meets with the students, the assigned Disability Services counselor, and others necessary to determine a reasonable outcome. The director's review is completed within seven business days.
4. The Director of Disability Services provides an explanation of the decision in writing to the student.
5. If the student is unsatisfied with the director's decision, the student may request reconsideration be made by members of the ADA compliance committee.

For any questions about this process, contact Disability Services at 704.330.6621 or [disability.counselingservices@cpcc.edu](mailto:disability.counselingservices@cpcc.edu) ([disability.counselingservices@cpcc.edu?subject=Regarding%20the%20grievance%20procedure](mailto:disability.counselingservices@cpcc.edu?subject=Regarding%20the%20grievance%20procedure)).

## **Emergency Food Pantries**

Service-Learning partners with a local non-profit, Loaves & Fishes, to establish Emergency Food Pantries on Central Piedmont campuses for students who are facing food insecurities. The Emergency Food Pantries provide individuals and households within the Central Piedmont community two days worth of non-perishable food per visit. The amount of food received depends on how many people live in the household. Individuals are eligible to visit the food pantry two times each month, every month. Students need to bring their college identification cards with them when visiting a pantry.

Emergency Food Pantries are located on:

Cato Campus, Cato III Bldg, Room 185  
Central Campus, Worrell, Room 2167  
Harper Campus, Lower Level, Room 111  
Harris Campus, Harris I Bldg, Room 1239  
Levine Campus, Levine II Bldg, Room 1323  
Merancas, TS, First Floor on Faculty Wing

Information including hours of operation is available online at the Service-Learning website under Emergency Food Pantries.

## **Financial Aid**

### **Financial Aid Mission Statement**

*The mission of Central Piedmont's Financial Aid Office is to provide excellent assistance to all students and to make every effort to ensure that the students who desire to attend the college, but cannot afford to do so, are provided financial assistance to complete their educational goals. The Financial Aid Office is committed to providing quality service to students, the college and the community.*

*In pursuing our mission, we strive to uphold the highest degree of professionalism, confidentiality, honesty, and integrity; embrace emerging technologies; and work collaboratively with all areas of the college, recognizing that only together we can achieve our common goal to enhance enrollment, retention and academic success for our students.*

### **Steps to Obtain Financial Aid**

#### **Step 1: Determine Eligibility for Financial Aid**

To be eligible for financial aid, potential candidates must:

- Apply for an FSA identification number at fsaid.ed.gov.
- Complete a new Free Application for Federal Student Aid (FAFSA), or a submit a renewal application, using the Central Piedmont school code: 002915 at the FAFSA website: fafsa.gov.
- Be admitted to a degree, diploma or certificate program eligible for Financial Aid - typically programs consisting of at least 16 credit hours. (NOTE - courses not eligible for financial aid may include: 1) courses audited or completed by examination, or 2) Career Development or Continuing Education non-credit courses.
- Be enrolled or accepted for enrollment in a program of study that is eligible for financial aid. (Please check with the Financial Aid Office for a complete list of eligible programs.) (NOTE - Federal and state grants only pay for courses required for the degree or certificate programs in which students are enrolled. Courses not required to earn a degree or certificate cannot be counted in determining enrollment level for purposes of Title IV eligibility.)
- Demonstrate financial need.
- Be a U.S. citizen or eligible non-citizen.
- Have a valid Social Security number.
- Be registered with the Selective Service (males only).
- Have a High School Diploma or GED.
- Complete a Drug Conviction Worksheet to determine eligibility, if ever convicted of possessing or selling illegal drugs. A federal or state drug conviction may disqualify candidates for Title IV funds.
- Be in good standing (not in default) with any Title IV student loan borrowed to attend any institution.
- Maintain Satisfactory Academic Progress.

To be eligible for financial aid, potential candidates must not:

- have borrowed in excess of Title IV loan limits.
- be enrolled concurrently in an elementary or secondary school

**Step 2: Activate a Central Piedmont Student Email Account**

All communication from the Financial Aid Office (as well as all official college communication) is sent through Central Piedmont student email accounts. To receive communications, students must **establish a Central Piedmont email account from the home page of the college website**, cpcc.edu. To do that, they **click Central Piedmont Login** on the home page, first, to create a user ID. After that, they are able to **click Student Email** to log into their student email account.

**Step 3: Apply for Financial Aid**

**Financial Aid Priority Dates**

In order to provide adequate time to process and award financial aid to students prior to the start of classes, priority dates are identified for each semester for submitting the requested documentation. Priority deadline dates are:

<b>Semester</b>	<b>Deadline</b>
<b>Fall</b>	<b>July 1</b>
<b>Spring</b>	<b>December 1</b>
<b>Summer</b>	<b>May 1</b>

Once requested documentation is received, students receive an email stating that they have been awarded financial aid. Students may view their award letters through their MyCollege accounts.

**Missed Priority Deadlines**

Students are strongly encouraged to apply for financial aid. All applications are accepted and processed; however, late applications may not

be processed in time for financial aid awards to pay for tuition or books. Students who submit applications after priority deadlines should plan to pay for tuition and books to avoid cancellation of class registration. If they then qualify for financial aid after their applications are processed, deposits to their selected refund preference are issued to them later in the term.

**Application Process**

**Award Year** - The financial aid award year runs from **July 1 to June 30**. **Students need to complete an application for financial aid each year.**

**FAFSA** - Students can apply for federal financial aid by completing the Free Application for Federal Student Aid (FAFSA) available online at fafsa.ed.gov. FAFSA on the Web Worksheets are available in the Financial Aid Office. If web access is unavailable, or assistance is needed, FAFSA workshops are held on Fridays. For times and locations of the workshops, or to make an appointment, call the Financial Aid Office at 704.330.6942.

**Corrections** - If a mistake is made in what is reported on the FAFSA, a correction must be made.

Note: The online FAFSA does not permit the Social Security number (SSN) to be changed. If a mistake is made in reporting the SSN, the FAFSA must be completed again.

**College Code Number** – The Federal Title IV School Code for Central Piedmont: **#002915 must be included as one of the top three schools on the FAFSA**. The Financial Aid Office receives results of the FAFSA electronically within two weeks. The number to call to inquire about application status, request a duplicate student aid report, or add another college to the FAFSA is 1.800.4FED.AID / 1.800.433.3243.

**Transfer Students** - Students transferring to Central Piedmont must add the college’s federal school code (#002915) to the FAFSA. It is the student’s responsibility to notify the Financial Aid Office if he/she attended another college during the semester. **A student cannot receive financial aid at two colleges during the same semester.**

**IRS Data Retrieval Tool** - The IRS Data Retrieval Tool allows applicants who have already filed their federal income tax returns to pre-fill answers to some questions on the FAFSA by transferring data from their federal income tax returns. This can save the family time in completing the FAFSA. It also may reduce the likelihood that a FAFSA is selected for verification.

**FSA ID** - The FSA ID allows students and parents to access and electronically sign the online version of the FAFSA with a user-selected username and password. The FSA ID is a username and password that has replaced the Federal Student Aid PIN and must be used to log in to certain U.S. Department of Education websites.

The FSA ID confirms accurate identity when financial aid information is accessed and electronically signs Federal Student Aid documents. It also provides a single sign-on for accessing all Department of Education’s student/parent websites, such as FAFSA on the Web, National Student Loan Data System (NSLDS) and StudentLoans.gov.

This login process is more secure, eliminating the need for students and parents to provide personally identifiable information (such as name, date of birth and Social Security Number) every time they access U.S. Department of Education websites. It also permits self-service password retrieval by email and name changes (example: marriage).

**FSA ID Requirements:**

- FSA ID usernames must be at least six alphanumeric characters.
- Passwords must be 8-30 alphanumeric characters.
- Passwords may not match the individual's name, social security number or date of birth.
- Everyone is required to change his/her password at least once every two years.
- When choosing a password, remember that the FSA ID is also an electronic signature used to sign the FAFSA, loan promissory notes and other legal documents.
- Each FSA ID must be associated with a different email address, so parents and students must have their own email address.
- Parents may not use their own email address for a dependent student; students must have their own email addresses.
- A test email message is sent to the email address to confirm its validity.

The FSA ID can be created by logging into the Federal Student Aid website and following the steps provided.

**Step 4: Verification**

The Financial Aid Office is required by the Department of Education to verify files for applicants selected for verification by the Federal Processor. Verification is a process to confirm that the information provided on the FAFSA is accurate. The Financial Aid Office reserves the right to select files for verification if there is inconsistency or discrepancy in information submitted. All requested documentation must be submitted to the Financial Aid Office before awards can be finalized.

## Financial Aid Calendar

View the Financial Aid Calendar to learn more about financial aid deadlines, bookstore dates, disbursement dates, and other important dates.

## Year-Round Federal Pell

Eligible students may receive a full Federal Pell Grant for a summer semester, even if they received a full Federal Pell Grant during fall and spring semesters. Year-round Federal Pell allows students to receive up to 150 percent of a regular grant award over the course of the academic year so that they can continue taking classes in the summer and finish their degrees faster than they would otherwise. With careful planning, Federal Pell Grant recipients may take advantage of this new regulation to earn their degree faster.

Note: The provisions of the law state that any Federal Pell Grant received is included in determining the student's Federal Pell Grant duration of eligibility and Lifetime Eligibility Used (LEU). To be eligible for additional Federal Pell Grant funds, students must be:

- otherwise eligible to receive Federal Pell Grant funds for the payment period
- enrolled at least half-time in the payment period(s) (6 credit hours) during the summer term
- maintaining satisfactory academic progress

# Financial Aid Processes and Federal Regulations

## Financial Aid Freeze Dates

In accordance with federal regulations, the Central Piedmont Financial Aid Office establishes a freeze date each semester to set enrollment status for disbursing federal and state financial aid. Financial Aid freeze dates are the dates when enrollment status is frozen or locked for financial aid purposes. Current enrollment status on freeze dates is considered to be the official enrollment status for reporting purposes and financial aid eligibility. At these times, financial aid is adjusted for the term to reflect current enrolled credits eligible for financial aid. For example, if a student registers for full-time status at the beginning of a term and later drops credits before the freeze date, financial aid is revised to match eligibility, based on the new number of enrolled credits as of the freeze date and on the types of aid awarded. Credits added after the Freeze Date cannot be used to increase financial aid eligibility. For students who are retroactively awarded financial aid (after the freeze date), credit hours are frozen at the time the award is made and payment is based on current enrollment status.

Before financial aid freeze dates, students should plan accordingly to register for courses in their program of study and for the correct number of credit hours. Otherwise, their aid may require repackaging, which also might affect their student bill.

**Things to Remember about Financial Aid Freeze Dates:**

- Information or corrections to the Free Application for Federal Student Aid (FAFSA) submitted after the Freeze Date might affect financial aid.
- Enrollment status (full-time, 3/4 time, 1/2 time, less than 1/2 time) is locked for financial aid eligibility; actual courses are not locked.
- Financial aid is adjusted for enrollment level, as appropriate, if course credit load is increased or reduced before the Freeze Date. Students are responsible for payment of any balance on their accounts due to reduced financial aid created by reduced credit load.
- Adding credits after the Freeze Date does not increase financial aid received.
- Taking courses which begin after the freeze date may affect financial aid. For example, after the freeze date, the Federal Pell Grant is not disbursed until after courses have started. The grant is reduced accordingly for students who fail to begin attendance in all classes.



## Awarding Financial Aid

The financial aid package should be completed before course registration, or tuition and fees must be paid before the designated due dates. If tuition and fees are not paid by designated due dates, registration is canceled.

The Financial Aid Office reserves the right to adjust a financial aid package when an over-award is made. Students are required to notify the Financial Aid Office if any additional gift, aid or assistance is received for educational expenses. Furthermore, the Financial Aid Office voids any award if it is determined that the student provided incorrect or false information on the financial aid application. All financial aid awards are subject to change if

- the information on which they were based changes,
- federal regulations require a change, or
- an over-award occurs.

The Central Piedmont Financial Aid Office adjusts student awards throughout the drop/add period. After the drop/add period, no awards are adjusted unless a "never attended" or a "complete withdrawal" is received from the instructor.

The award letter is based on full-time enrollment for an entire year. Any changes in enrollment status must be reported to the Financial Aid Office.

- Full-time status (100%) means enrollment for a minimum of 12 credit hours.
- Three-quarter time status (75%) means enrollment for 9 to 11 credit hours.
- Half-time status (50%) means enrollment for 6 to 8 credit hours.
- Less than half-time status consists of enrollment in 1 to 5 credit hours.

## Clock Hour/Credit Hour Conversion Programs

Per Federal regulations, the determination of enrollment status (full, 3/4, 1/2, or less) is different for the following program(s) of study:

- Architectural Technology Certificate Specialization in Fast Track Computer-Aided Drafting & Design - C40100-52
- Culinary Arts Demi-Chef Certificate - C55150-C5
- Dental Assisting -D45240
- Diesel & Heavy Equipment Technology Diploma - D60460-D3
- Hospitality Management Diploma in Hotel Management - D25110-D1
- Hospitality Management Diploma in Restaurant Management - D25110-D2
- Nurse Aide - D45970
- Ophthalmic Medical Assistant Diploma - D45510

This determination of enrollment status is different because the programs have one or more courses that cannot be used toward a two-year degree program. For a list of converted courses, check with the Financial Aid Office.

## Less Than Half-Time Attendance

Federal regulations require a less than half-time budget calculation restriction to tuition, books, and transportation for students who are enrolled less than half time. If a less-than-half-time enrollment status is a result of dropped or never attended classes, Federal Pell is reduced and

an over-award could occur. It is the responsibility of the student to satisfy any balance before receiving additional federal aid.

## Transferring to Another College

Financial Aid awards cannot automatically be transferred from one college to another. Students need to have FAFSA results released to the new college. All student financial aid documents are the property of Central Piedmont and cannot be released.

Financial aid cannot be received simultaneously at two or more colleges.

## Refunds

Students receive a GREEN information packet from BankMobile approximately 2-3 weeks after enrollment. Once the packets are received, the student needs to create an account with BankMobile.

Remaining financial aid funds (after tuition/fees and books) are released for disbursement according to the schedule on the Financial Aid Calendar.

The actual dates on which students receive refunds are based on their preferred designated method for receiving refunds:

- **Electronic Deposit to Another Account**

Money is transferred to another account the same business day BankMobile receives funds from Central Piedmont. Typically, it takes 1-2 business days for the receiving bank to credit funds to an account.

- **Electronic Deposit to a BankMobile Vibe Account**

For students who open a BankMobile Vibe Account (upon identity verification), money is deposited the same business day BankMobile receives funds from Central Piedmont.

**Funds may be delayed up to two weeks for students who do not select a preferred refund preference.**

It is important to keep student addresses, telephone numbers and email addresses updated. Changes in personal information can be made online at [mycollege.cpcc.edu](http://mycollege.cpcc.edu) or in person at Admissions, Records & Registration on any Central Piedmont campus.

Any unclaimed refunds are voided after 90 days. Funds can be reissued only BEFORE August 1 for the prior fiscal year award (July 1 to June 30).

## Programs/Courses Ineligible for Financial Aid

Diploma or certificate programs containing less than sixteen (16) credit hours are not eligible for federal student aid. Although the Financial Aid Office makes every effort to monitor these programs, it is the responsibility of the student to ensure acceptance into a program of at least sixteen (16) credit hours in order to be eligible for federal aid.

Please note: Not all diploma or certificate programs consisting of 16 or more credit hours are eligible for federal student aid. In addition, Career Development, Continuing Education, courses for which credit by examination was received and/or courses being audited by the student are ineligible for financial aid. For a list of ineligible programs, students may contact their academic counselor or a Financial Aid representative.

## Policy on Return to Title IV Funds

Federal regulations require a recalculation of federal financial aid eligibility for students who withdraw, drop out, or are dismissed prior to completing 60 percent of an academic term. The Return to Title IV recalculation is



computed using the 50 percent point of the semester for students who stop attending classes within a term without formally withdrawing if the last date of attendance cannot be determined. (An example of the Return to Title IV Fund calculation is available in the Financial Aid/Veterans Affairs Office.) Financial aid students should notify the Central Piedmont Financial Aid Office before withdrawing.

Recalculation for percent of aid earned is based on the following formula: Percent Earned equals [Number of Days Completed Prior to Withdrawal Date] divided by [Total Days in a Semester/Term]. If the calculation results in an overpayment, the student owes the balance to Central Piedmont. If the student fails to pay the debt within 45 days of notification, the debt is reported to the U.S. Department of Education as an overpayment. Federal eligibility is lost until the debt is paid or satisfactory arrangements are made with the U.S. Department of Education.

## FERPA Confidentiality

The Central Piedmont Financial Aid Office communicates with students through their Central Piedmont email accounts. Due to the Family Educational Rights and Privacy Act (FERPA), only general questions may be answered via email unless students use their Central Piedmont email address and include their student ID numbers. Due to confidentiality requirements described in FERPA regulations, information cannot be disclosed to parents. Students may access their Central Piedmont MyCollege account to obtain information regarding their grades, financial aid awards, satisfactory academic status, and student billing. When visiting the Central Piedmont Financial Aid Office, students should bring their Central Piedmont student ID card.

## Financial Aid Fraud and Forgery

The falsification and misrepresentation of information submitted for the purpose of receiving financial assistance will result in the cancellation of future assistance and repayment of all prior assistance received under false pretense. Examples of fraud and forgery are: signing another person's name and falsification of income. A student who purposely provides false or misleading information to receive federal financial aid is in violation of the college's Rules of Conduct and may face prosecution under state and federal laws.

## Financial Aid Programs

### Financial Aid Programs

Applicants must complete the Free Application for Federal Student Aid (FAFSA) to determine eligibility for federal and/or state student aid and institutional scholarships.

### Federal Programs

#### Federal Pell Grants

The Federal Pell Grant is a federal program designed to provide financial assistance to undergraduate students who demonstrate financial need to attend college. The U.S. Department of Education uses a standard formula, established by Congress, to evaluate information reported on the FAFSA. The formula produces an EFC - Expected Family Contribution number. The Student Aid Report contains the EFC number which determines eligibility. The amount of the Federal Pell Grant award depends on students' EFC, their cost of attendance, their full-time or part-time status and whether they attend school for a full academic year or less. Students need to be enrolled in an eligible, college credit curriculum program consisting of at least 16 credit hours in length. Students with

bachelor's degrees are not eligible. A Pell Grant award does not have to be repaid.

Pell Grant awards are based on full-time enrollment which is 12 credit hours or more. This applies to all programs. Students enrolled in less than 12-credit hours may use the Pell Grant Calculator to determine their estimated Pell Grant.

#### Federal Supplemental Educational Opportunity Grant

A Federal Supplemental Educational Opportunity Grant (FSEOG) is for undergraduates with exceptional financial need who are students with the lowest Expected Family Contributions (EFC). FSEOG awards do not have to be repaid and priority is given to students who receive a Federal Pell Grant.

The Federal Supplemental Educational Opportunity Grant program is a campus-based program administered directly by the Central Piedmont Financial Aid Office. The amount of aid awarded depends on students' financial need, the amount of other aid they receive and the availability of funds. Students with bachelor's degrees are not eligible.

#### Federal Work-Study

The Federal Work-Study (FWS) program utilizes federal funds to provide part-time employment for undergraduate and graduate students with financial need to help meet their educational expenses. Students with bachelor's degrees are eligible. Students enrolled at least 6 credit hours may work an average of 15 to 20 hours per week. FWS employment is determined by students' total financial need, their class schedule, their credit hours of enrollment and their academic progress each term.

Awarded FWS funds are limited to availability of positions, funds, and completion of the entrance/interview process. There are no term limitations on earnings, provided annual limits on the student's award letter are not exceeded.

Students are paid each month. The amount paid is according to the position and the number of hours worked.

All available FWS positions are advertised on the Central Piedmont Human Resources website under Careers at Central Piedmont.

#### America Reads | America Counts | Community Service

America Reads, America Counts, and Community Service are Federal Work-Study programs offered in fall and spring semesters. These programs allow Central Piedmont students to partner with local elementary schools and nonprofit agencies in an effort to increase children's literacy and outreach to the community. Students gain valuable work experience by being involved in service activities that support literacy and community outreach.

America Reads, a national campaign initiated in 1997, challenges every American to help children learn to read well and independently by the end of elementary school. Nationwide, there are approximately 1,200 colleges and universities participating in the America Reads Challenge.

Building on the success of the America Reads Challenge, America Counts was initiated in 1999 as an effort to assist students in mastering challenging mathematics, including the foundations of algebra and geometry, and improve student achievement in mathematics by the end of the ninth grade.

The Federal Work Study Community Service Program is an opportunity for students to work in a not-for-profit organization while earning their Federal Work Study money. Community service jobs are in fields such as health

care, child care, literacy training, education (including tutorial services), welfare, social services, transportation, housing and neighborhood improvement, public safety, crime prevention and control, recreation, rural development and community improvement, support services for students with disabilities as well as activities in which students serve as mentors for purposes such as tutoring, supporting educational and recreational activities and counseling (including career counseling). The benefits of taking a community service position are:

- Helping improve the quality of life for community members
- Earning Federal Work Study money
- Gaining solid work experience in areas such as public service, psychology, education, administration, etc.
- Acquiring professional contacts in one's community and school, as well as networking opportunities
- Making a difference

*The America Reads Challenge Federal Work Study program is a strong example of how students both give to and receive from the community.*

*The program promotes access to college by helping students finance post-secondary education costs while offering those same students an opportunity to pursue community service. – Richard W. Riley*

For more information about these programs please contact Service-Learning at 704.330.6445, visit Central Piedmont Service-Learning or call the Financial Aid Office at 704.330.6942

## State Programs

### North Carolina Community College Grant

The North Carolina Community College Grant is a need-based grant established by the North Carolina Legislature. The North Carolina State Education Assistance Authority, through College Foundation, Inc., makes award determinations.

The North Carolina Community College Grant provides funds to help meet the educational costs of North Carolina residents attending community colleges.

To be eligible, a student must:

- be admitted to a curriculum program and be enrolled for at least six credit hours per semester,
- be a North Carolina resident,
- have completed and submitted the Free Application for Federal Student Aid (FAFSA),
- qualify for the grants based upon a valid Expected Family Contribution (EFC) calculation under Federal Methodology and the program's recognized *required educational expenses* for attending a North Carolina community college,
- meet the satisfactory requirements of the Central Piedmont Financial Aid Office and the college, and
- meet all other eligibility requirements for Federal Student Aid.

### North Carolina Education Lottery Scholarship

The North Carolina Education Lottery Scholarship (NCELS) was created by the 2005 General Assembly to provide financial assistance to students in need attending eligible colleges and universities located within the state of North Carolina.

Applicants must:

- be admitted to a curriculum program and be enrolled for at least six credit hours per semester
- be a North Carolina resident
- have completed and submitted the Free Application for Federal Student Aid (FAFSA)
- qualify for the grants based upon a valid Expected Family Contribution (EFC) calculation under Federal Methodology and the program's recognized *required educational expenses* for attending a North Carolina community college
- meet the Satisfactory Academic Progress requirements of the Central Piedmont Financial Aid Office and the college
- meet all other eligibility requirements for Federal Student Aid

## Scholarships

Institutional scholarship funds are provided to eligible learners through the continued generosity of the Central Piedmont Foundation, individuals, industries, businesses, organizations, civic clubs, and other community partners. Completing a **Free Application for Federal Student Aid (FAFSA)** is an essential part of applying for scholarships through the Central Piedmont Scholarship Program. Candidates also must complete the general scholarship application on Central Piedmont's scholarship management system to be considered for opportunities that match their profiles.

Central Piedmont's scholarship management system is a comprehensive database designed to simplify the application process in searching for multiple Central Piedmont Institutional scholarship offerings. Scholarship applications are accepted until all funds are awarded. Students are encouraged to apply early for scholarship consideration.

- Contact the Central Piedmont Financial Aid Office at 704.330.6942 or find Central Piedmont Scholarships on the Financial Aid website to see scholarship deadline dates and a **comprehensive list of scholarships**.
- Find **outside scholarship opportunities** on the Central Piedmont Financial Aid website under Community Scholarship Listings.

Scholarship donors should direct contributions to the Central Piedmont Foundation, which supports and supplements educational programs, projects and scholarships for which other funds are unavailable or inadequate. Questions about the establishment of scholarships or requests for other information regarding scholarship donations should be directed to the Central Piedmont Foundation at 704.330.6869. The Central Piedmont Foundation is a 501(c)(3) organization eligible to receive tax-deductible contributions.

Scholarships are available for entering first-year students and for continuing students and can cover the full cost of attendance for recipients. Scholarships also are awarded on a competitive basis applying the following criteria: academic excellence, achievement, leadership qualities, need or other criteria as stipulated by the donor. Awards usually are restricted to tuition assistance and require recipients to maintain a minimum grade point average to continue receiving the scholarship. Each scholarship is awarded for one academic year beginning with the fall semester. Students need to reapply each year by completing both the Free Application for Federal Student Aid (FAFSA) at [fafsa.ed.gov](http://fafsa.ed.gov) and the scholarship application.

# Financial Aid Satisfactory Academic Progress (SAP)

## Satisfactory Academic Progress (SAP) to be Eligible for Financial Aid

Federal regulations require students receiving federal financial aid to maintain satisfactory progress according to standards set by Central Piedmont and the federal government. This policy applies to students applying for or receiving federal and state funds. Failure to fulfill any part of the agreement may result in the cancellation of financial aid awards and students may be responsible for repaying any funds received. At Central Piedmont, Satisfactory Academic Progress (SAP) standards also apply to non-federal aid, including state funds, institutional funds, and Foundation scholarships. Students are expected to maintain at least a minimum level of progress toward the successful completion of course requirements for a degree, certificate or diploma. Progress is measured both qualitatively and quantitatively. As recipients of federal or state financial aid, students also have individual rights and responsibilities.

### Definition of Satisfactory Academic Progress

Satisfactory Academic Progress (SAP) is defined as passing 67% of all hours attempted (67% Rule) with a required grade point average of 2.0 (GPA Rule), not exceeding 150% of total attempted hours needed to complete an approved program defined by the Department of Education (150% Rule).

### Semester Increments

To ensure students make sufficient progress throughout their courses of study, a maximum time frame for completion, divided into increments, is required. At the end of each increment (semester), the college must determine whether students have completed a minimum percentage of work toward their educational objective, degree or certificate for all semesters thus far completed. Progress is measured throughout the academic program by:

1. cumulative grade point average (qualitative measure) and
2. credits earned as a percentage of credits attempted, known as the "pace of completion" (quantitative measure).

### Evaluating Progress

The Central Piedmont Financial Aid Office evaluates Satisfactory Academic Progress before aid is awarded and again after grades are posted for every term, starting with the first semester of enrollment. To reasonably measure satisfactory progress toward completion of a degree, diploma or certificate, **a student's total academic record at Central Piedmont is evaluated, regardless of whether or not financial aid was received for the entire period of enrollment.** Some career studies certificate programs are ineligible for student financial aid, but those credits *are* counted for all SAP requirements if the student enrolls later in an eligible program.

#### Qualitative Standard

**Cumulative GPA Requirements (GPA Rule):** To remain eligible for financial aid consideration, students must meet minimum cumulative grade point average requirements, based on a progressive scale. The calculation includes grades of A, B, C, D, F, P and R. The GPA evaluation excludes transfer credits.

#### Quantitative Standards or Pace of Completion

**Completion Rate (67% Rule):** Students must, at a minimum, receive satisfactory grades in 67% of all credits attempted.

This calculation divides the cumulative total number of credits *successfully completed* by the cumulative total number of credits *attempted*. All credits attempted at Central Piedmont are included, except any audited courses for which a status of "AU" was received by the time of the class census date. All credits accepted for transfer count as both attempted and successfully completed credits. Credits with satisfactory grades at the college are those for which a grade of A, B, C, D or P was earned.

**Maximum Hours (150% Rule):** To continue receiving financial aid, students must complete their programs of study before attempting 150% of the credits required for a program. The 150% calculation excludes developmental coursework. Attempted credits from the entire enrollment period at Central Piedmont, plus all applicable transfer credits, are counted - regardless of whether or not financial aid was received for the entire period of enrollment.

### Transfer Students

To calculate satisfactory academic progress, transfer students who apply for financial aid must request official transcripts from all other colleges attended. Official transcripts must be submitted directly to one of the campus Student Records Office. Credits officially accepted in transfer are counted in the 67% Rule and in determining the maximum number of allowable credit hours for financial aid eligibility. The college has the option, on an individual student basis, to place transfer students on either Financial Aid Warning or Suspension status immediately upon evaluation for financial aid, if academic history at previous colleges indicates a pattern of unsuccessful academic work.

### Changing Programs or Completing a Second Program

For students who switch programs or attempt a second degree or certificate, all credits earned from the first degree or certificate are included in hours attempted and completed. Depending on circumstances, an appeal may be warranted.

### Developmental Studies

Students may receive financial aid for a maximum of 30 semester hours of developmental courses, as long as all of the following criteria are met:

1. they are required to take developmental classes, based on their placement test results,
2. they are in a program of study eligible for financial aid, and
3. they meet Satisfactory Academic Progress (SAP) requirements.

Developmental courses (designated by course numbers below 100, or beginning with DMA or DRE) are included in the calculation of Satisfactory Academic Progress. Students enrolled in developmental courses must receive grades of A, B, C or P to remain in good standing. Developmental hours beyond the required 30 semester hours cannot count towards enrollment status for federal and state grants, nor can they count toward the cost of attendance for any campus-based programs.

### Cumulative Credit Hours Attempted

Cumulative credit hours attempted are defined as all credit hours attempted at Central Piedmont, and all credit hours transferred from other institutions. Attempted credits include those for which grades of "A" through "F," "P," "R," "W," "I/A," "I/B," "I/C," "I/D," "I/F" or "I" were earned.

### Cumulative Credit Hours Completed

Cumulative credit hours successfully completed are defined as those for which grades "A" through "D," "P," "I/A," "I/B," "I/C," "I/D" or "I/F" were earned. Credit hours not successfully completed are defined as those for which "I," "I/F," "F," "R" or "W" were received.

### Repeated Courses

Repeated courses are counted among hours attempted and also toward maximum credits allowed for each type of program for which financial aid is received. Repeated courses may enable students to achieve a higher cumulative grade point average. Students may repeat courses with financial aid until successfully completed, but repeating courses adversely affects the completion rate requirement. Financial aid will pay only once to repeat a successfully completed class (grade "D" or higher) in order to achieve a higher grade. All attempts count toward the financial aid cumulative grade point average and cumulative completion rate.

### Audited Courses

Credit hours completed to audit a course ("AU" grade received) do not apply toward an associate degree, diploma or certificate program; therefore, credit hours with this designation cannot be included in determining enrollment status for financial aid or Satisfactory Academic Progress. An enrollment status change is made if students wish to have a grade changed to audit status ("AU") after financial aid is disbursed. This change may result in a reduction of financial aid eligibility and a balance owed to the college.

### Incomplete Grades

Courses with grades of "I" (Incomplete) are considered as credit hours attempted and not completed. Students who make arrangements with an instructor to finish required coursework are not required to re-register for the same class during the next semester in order to complete the work. If the unfinished course causes a student to be placed on financial aid probation or suspension, the student may appeal once the course is completed. A student may appeal for a re-evaluation of Satisfactory Academic Progress by submitting or faxing the Satisfactory Academic Progress Appeal Form to the Financial Aid office on Central Campus. It can be accessed on the Central Piedmont Financial Aid website from the Forms Quick Links. If the grade becomes final before the review, the actual grade, credits attempted and credits earned are used to determine whether the student is making satisfactory progress.

***Students should contact the Financial Aid office before changing programs and/or withdrawing from any courses.***

### Course Withdrawals

Students who withdraw from classes officially or unofficially should understand how withdrawals affect their eligibility for financial aid as determined by the Satisfactory Academic Progress procedure. A withdrawal ("W" grade status) counts as attempted, not completed, credits in the Financial Aid GPA calculation. Financial Aid recipients should discuss the possibility of withdrawing with a financial aid representative before doing so.

**NOTE: Reducing enrollment during a semester may create adverse consequences for financial aid recipients:**

1. Satisfactory Academic Progress may be affected.
2. **Students may be required to repay a percentage of financial aid received for the semester** in cases of complete withdrawals. (See Return of Title IV Funds.)

### Change of Major

Students who change their major (program of study) still are responsible for maintaining Satisfactory Academic Progress by the procedures outlined. A review of Satisfactory Academic Progress is based only on students' current programs of study. Students changing from an associate program to a diploma or certificate program may lose federal and state eligibility immediately upon making the change.

### EFL-English as a Foreign Language Studies

Allowable credits for EFL- English as a Foreign Language courses are limited, as long as they are taken as part of an eligible program and satisfactory academic requirements are met.

### Dual Enrollment

Students may not receive federal aid from more than one institution at the same time. Students transferring to Central Piedmont from other schools must have any aid received at former schools canceled.

### Summer Session

Credit hours attempted and earned during the summer session are included in the calculation of Satisfactory Academic Progress. Full-time status (12 credit hours) is the same for summer sessions as it is for fall and spring semesters.

## Student Financial Aid Status

### Satisfactory Status (S)

Students who continue to meet all aspects of the satisfactory academic policy will continue receiving financial aid.

### Warnings

#### Warning/GPA Probation (WG)

Students not meeting the 2.0-grade point average required for Satisfactory Academic Progress receive a probationary status of "WG".

#### Warning/Pass Rate Probation (WP)

Students not meeting the 67% pass rate required for Satisfactory Academic Progress receive a probationary status of "WP".

#### Warning/GPA & Pass Rate Probation (WB)

Students not meeting the 2.0 GPA nor the 67% pass rate required for Satisfactory Academic Progress are placed on a probationary status of "WB".

### Suspension from Receiving Financial Aid

Students who previously held a warning status and failed to meet financial aid Satisfactory Academic Progress standards during the following semester, are placed on financial aid "Suspension" status. While on financial aid suspension, students cannot receive federal, state, or institutional financial aid during the next attending semester. Students placed on financial aid suspension may appeal the decision by completing the Satisfactory Academic Appeal Process (see below).

#### Suspension/GPA (SG)

Students who had a warning status and are now suspended from receiving financial aid for not meeting the 2.0 GPA required for Satisfactory Academic Progress are assigned a status of "SG".

#### Suspension/Pass Rate (SP)

Students who had a warning status and are now suspended from receiving financial aid for not meeting the 67% pass rate required for Satisfactory Academic Progress are assigned a status of "SP".

#### Suspension/GPA & Pass Rate (SB)

Students who had a warning status and are now suspended from receiving financial aid for not meeting the 2.0 GPA nor the 67% pass rate required for Satisfactory Academic Progress are assigned a status of "SB".

### Standards of Progress (SOP)



Academic requirements for avoiding a warning status and staying in school differ from financial aid requirements for Satisfactory Academic Progress. Academic standing or Standards of Progress (SOP) is noted on registration records. Financial aid status is noted on financial aid screens in the Student Information System. Any student suspended from Central Piedmont for academic or behavioral reasons is automatically ineligible for financial aid.

#### **After Financial Aid is Suspended**

Except for appeals granted for unusual or mitigating circumstances, students can reestablish eligibility only by taking action that brings them in compliance with the qualitative and quantitative components of the Financial Aid Satisfactory Academic Progress Standards, including the maximum time frame requirement.

Students are notified through their student email when placed on warning or suspension. If students take necessary actions to be in compliance with the qualitative and quantitative components of the Financial Aid Satisfactory Academic Progress Standards, the Federal Pell Grant and other types of financial assistance (depending on availability of funds) are reinstated at the beginning of the next term of attendance, if they are otherwise eligible. When approved by the Financial Aid Appeals Committee, the financial aid status upon reinstatement is "Probation."

## **Appealing Ineligibility for Financial Aid**

Students suspended from receiving financial aid for not meeting required Satisfactory Academic Progress (SAP) guidelines, may appeal a suspension if unusual or extenuating circumstances contributed to their failure to meet the guidelines. If the appeal is granted, students are placed on SAP Continued Probation status and are allowed to receive financial aid for the next semester.

Students may appeal the termination/suspension of financial aid by completing a Satisfactory Academic Progress Appeal Form accessed from the Forms Quick Links on the Financial Aid website. Appeals must be submitted in writing with supporting documentation explaining any unusual circumstances that caused the student's academic progress to be less than required. Appeals should also include:

- a) reasons why minimum standards were not met (what happened), and
- b) reasons why eligibility should be reinstated instead of terminated (what changed).

Appeals must be submitted in writing with supporting documentation explaining the unusual circumstances that caused their academic progress to be less than required. Federal law gives some examples where allowances might be made for mitigating circumstances; for instance, a serious illness or injury, or the death of a relative. An appeal may not be based upon the need for financial aid or a lack of knowledge that the assistance was in jeopardy. Failure of the student to adequately explain circumstances and actions may result in an appeal being denied.

#### **Regaining Federal Student Aid Eligibility**

Except for when an appeal is granted for unusual or mitigating circumstances, students can reestablish eligibility only by taking action that brings them in compliance with the qualitative and quantitative components of the Financial Aid Satisfactory Academic Progress Standards. A student for whom an SAP appeal is approved is expected to complete 100% of all attempted credit hours with a minimum 2.0 grade

point average the semester following the approved appeal. Satisfactory progress must be demonstrated by the end of the specified probationary term before further aid can be awarded.

#### **Financial Aid Academic Plan**

Students may successfully appeal a financial aid suspension, but have an academic situation making it mathematically impossible for them to regain Satisfactory Academic Progress (SAP) eligibility for the next semester. Per Federal SAP guidelines, the Financial Aid Office may use discretion in whether to place such a student on a Financial Aid Academic Plan. This plan is designed to outline steps of progress that, if followed each semester by the student, would lead to regaining SAP eligibility within a specified time frame. If the student does not meet the progressive steps each semester, financial aid is immediately terminated. Students can reestablish eligibility only by taking action that brings them in compliance with the qualitative and quantitative components of the Financial Aid Satisfactory Academic Progress standards.

#### **Appealing Financial Aid Ineligibility due to Exceeding Maximum Credits Allowed**

Students who attempt more than 150% of the credits required for their program of study do not meet requirements for satisfactory academic progress. Students disqualified from receiving financial aid due to exceeding the 150% maximum time frame may appeal that decision by completing the Maximum Time Frame Appeal Form accessed from the Forms Quick Link on the Central Piedmont Financial Aid website.

#### **Regaining Federal Student Aid Eligibility**

Students who successfully appeal the 150% time frame are required to complete 100% of all course credits attempted from that point forward in order to complete their degree. They may not earn any grade lower than a "C", they may not withdraw from any class, and they may not take an Incomplete status in any class. Students who have been suspended from receiving financial aid, due to exceeding the maximum credits allowed, cannot take action to reestablish progress, unless an appeal is approved.

**Note: Students participating in the Federal Work-Study program who are suspended from financial aid due to exceeding the maximum time frame allowed, cannot continue working.,**

#### **Appealing Financial Aid Ineligibility due to Not Registering with Selective Service**

Male students who fail to register with the Selective Service before turning age 26 are ineligible for federal and state grants, including Federal Pell Grants and Federal Work Study.

#### **Students Required to Register with the Selective Service**

- **Male U.S. citizens** (regardless of where they live) and male permanent resident aliens living in the U.S. who were born after December 31, 1959 must register within 30 days of their 18th birthday (30 days before and after). If they fail to register during this time period, male students may submit a late registration up until their 26th birthday.
- **Male non-citizens** (including illegal aliens, legal permanent residents, seasonal agricultural workers, and refugees) who take up residency in the U.S. before their 26th birthday must register. All relevant INS forms (e.g., the Application for Resident Alien status, I-485, and so on) include a clear statement regarding the requirement to register.
- **Dual nationals of the U.S. and another country** must register, regardless of where they live.

- **Conscientious objectors** must register. If a draft is established, they will have an opportunity to file a claim for exemption based on their religious or moral objections, but they nevertheless, must register with the Selective Service.
- **Disabled men who can move about independently in public with or without assistance** must register, even if their disability would disqualify them from military service.
- **Members of the Reserve and National Guard who are not on full-time active duty** must register.
- **Men attending the Merchant Marine Academy** must register.
- **Men who attempted to enlist and were rejected prior to age 26** must register.

#### Students Not Required to Register with the Selective Service

- Men born from March 29, 1957 to December 31, 1959 were never required to register because the Selective Service program was not in operation at the time they turned 18. The requirement to register was reinstated in 1980 and applies to all men born on or after January 1, 1960 (50 USC 453). Although men born before March 29, 1957 were required to register, failure to register makes one ineligible for student aid only if one was born on or after January 1, 1960.
- Men who are hospitalized, institutionalized, or incarcerated are not required to register during their confinement.
- Men who are serving in the military on full-time active duty or who are attending the service academies are not required to register.
- Disabled men who are continually confined to a residence, hospital or institution are not required to register. However, if they are released before their 26th birthday, they must register within 30 days of their release.
- Non-immigrants visiting the U.S. on student or visitor visas or men and their families who are part of a diplomatic or trade mission.
- Citizens of the Federated States of Micronesia, the Republic of the Marshall Islands, or the Republic of Palau.
- Non-citizens who first entered the U.S. after turning age 26.
- Non-citizens who entered the U.S. as lawful non-immigrants on a valid visa and remained in the U.S. on the terms of that visa until after they turned 26. (The date of entry on Form I-94 will be relevant.)
- Students who are not yet 18. For federal aid purposes, students not yet 18 years old as of the date their FAFSA was submitted are eligible for federal student aid this award year, even if they turned 18 shortly afterward and have not yet registered. Such students would need to register to be eligible for federal student aid in subsequent years.

Male students, now age 26 or older, who did not register with the Selective Service are ineligible for Federal student aid and other Federal and state benefits. For those students, there are only two circumstances for regaining eligibility. Evidence must be shown that:

- 1) he was *not required to register*, or
- 2) failure to register was not *knowing and willful*.

Factors determining "knowing" and "willful" failure to register:

#### Knowing

Was he aware of the requirement to register or not?

If he knew about the requirement to register, was he misinformed about the applicability of the requirement to him (e.g., veterans who were discharged before their 26th birthday were occasionally told that they did not need to register)?

On what date did he first learn he was required to register?

Where did he live when he was between the ages of 18 and 26?

Does the status information letter indicate that Selective Service sent letters to him and did not receive a response?

#### Willful

Was the failure to register done deliberately and intentionally? In other words, did he have the mental capacity to choose whether or not to register and choose not to register?

#### Evidence a Student 26 or Older was not Required to Register for Selective Service

A student not required to register must obtain a *status information letter* from Selective Service. This letter indicates whether he was, or was not, required to register. To obtain such a letter, he may call 1-847-688-6888 or 1-888-655-1825 (stay on the line until the operator answers) or write to Selective Service System, PO Box 94638, Palatine, IL 60094-4638 and ask for a status information letter.

#### Evidence that Failure to Register was not Knowing and Willful

A student who did not knowingly or willfully fail to register must complete the Selective Service Appeal Form accessed from the Forms Quick Link on the Central Piedmont Financial Aid website. He must describe, in detail, the circumstances which prevented him from registering (e.g., hospitalization, institutionalization, incarceration, military service) and provide documentation of those events. The documentation must specify dates of events. (For example, if he served in the military and was released before age 26, he still would have been required to register within 30 days of his release.)

A student who was not a U.S. citizen must provide documentation of when he entered the United States and also provide his name, Social Security Number, date of birth, and mailing address. Additionally, he must submit a statement as to why his failure to register was not *knowing* or *willful*.

#### Appealing Financial Aid Ineligibility due to Unusual Enrollment

The U.S. Department of Education has established new regulations to prevent fraud and abuse in the Federal Pell Grant Program by identifying students with unusual enrollment histories. Some students with an unusual enrollment history (UEH) have legitimate reasons for their enrollment at multiple institutions. However, the Central Piedmont Financial Aid Office is required to review files of students with unusual enrollment history to determine future federal financial aid eligibility. If selected by the Department of Education (via the FAFSA), a resolution must be determined before they can receive financial aid.

#### Definition of Unusual Enrollment History

The Department of Education selects students for review who received a Federal Pell Grant at multiple institutions during the past three academic years. Once the Department of Education indicates students with an unusual enrollment history, the Central Piedmont Financial Aid Office must review the educational history of those students to determine their federal financial aid eligibility.

#### Review Process

- The Central Piedmont Financial Aid Office notifies students who are selected by the Department of Education for unusual enrollment.
- Those students must complete the Unusual Enrollment History Appeal Form accessed from the Forms Quick Links on the Financial Aid website and provide a copy of all transcripts from previous institutions attended during the past three years. They must have received

academic credit at any school, while receiving the Federal Pell Grant, during those relevant academic years.

- The Financial Aid Office verifies whether academic credit was obtained at each school during the relevant years. If so, students are notified that the requirement is satisfied. If students failed to receive academic credit at any institution during the relevant award years, their federal and state financial is denied and they are notified.

### Steps to Appeal Denial of Financial Aid

Students can appeal the financial aid denial by submitting

1. an Unusual Enrollment History (UEH) Appeal Form
2. a letter explaining the unusual enrollment history, and
3. documentation supporting the explanation provided in the appeal letter.

All appeal forms and documentation are reviewed by the Financial Aid Office, before notifying students of the decision.

### Processing Appeals

Appeal forms and documentation must be submitted to the Central Piedmont Financial Aid Office at least fifteen working days before the semester start date. Appeals after that date are processed by the end of the semester. Students are informed of their appeal decision through their Central Piedmont student email account. Students also may find their Satisfactory Academic Progress (SAP) status and the determination of their appeal on their MyCollege account. Classes are not held by financial aid for students submitting an appeal.

### Regaining Federal Student Aid Eligibility

Students denied federal student aid based on unusual enrollment history may have their financial aid eligibility reinstated once they have completed one academic term consisting of six credit hours of curriculum coursework in an eligible program of study. Students also must meet the standards of Satisfactory Academic Progress (SAP) for financial aid eligibility. Please note, in this situation, students may not drop or withdraw (officially or unofficially) from any course after the term begins. At the end of the completed semester, they must submit a letter requesting reinstatement with their final grade report.

Students who regain eligibility, either by appeal or by completing a successful term, will receive financial aid beginning in the payment period for which approval is given. For example, students denied in the fall term who complete a minimum of 6 credit hours, do not withdraw from any courses, maintain a 2.0 GPA and successfully meet stipulations at the end of the fall term, are eligible for federal aid in the spring term.

## International Programs and Services

The International Programs and Services Office is committed to supporting the academic and personal growth of international students at Central Piedmont who are on an F-1 student visa. Whether students need assistance with admissions, immigration-related issues, resources at the College, or want to learn more about the Charlotte community, International Programs and Services is here to help.

For more information, call the International Programs and Services Department at 704.330.6838, or visit the International Services website.

## Lost and Found

Lost and Found is managed by College Security Services. Found items can be turned in by calling the Security Dispatch Center at 704.330.6632. College Security Services will send an officer to pick up the item. Found items also may be returned to Security at each campus. Lost items are stored by College Security for 30 days. Unclaimed items beyond that time frame are disposed of according to North Carolina Law.

Inquiries about lost items should be directed first to the College Security Services Office at the campus where the item was lost. To determine if someone has turned in a lost item to Security, call 704.330.6632 to describe the item. Found items are electronically recorded by description in a database for all Dispatchers and Security Officers to access. If Security has an item similar to an item described, directions are given as to how and where the lost item may be identified and claimed.

## Single Stop

Single Stop strives to transform the lives of students with critical needs. This is accomplished by providing wrap-around services which connect students to college support systems and community resources. The goal is to offer support which assist students in overcoming financial barriers to persistence and success.

Services available through Single Stop include:

- Free tax preparation
- Benefits counseling
- Financial counseling
- Legal
- Referrals for other campus and community resources

All services are free for qualified Central Piedmont students.

The Single Stop office is located on Central Campus in Room 100 of the Central High Building and virtual visits are available by appointment.

Information is available online at the Single Stop website by phone at 704.330. 6435.

## Transfer Resource Center

### Preparation for Successful Transfer to Four-Year Institutions

The Transfer Resource Center offers advising and support services to Central Piedmont students who plan to transfer to a four-year college or university. Transfer advisors assist students in selecting courses at Central Piedmont aligned with their intended major at their intended four-year institution and facilitate a smooth transition into their program. To assist transfer students in gathering information about senior (four-year) institutions, the office maintains a comprehensive website of resources which includes transfer degree plans for all UNC System schools.

### Transfer Tuesdays and Transfer Fairs

The Transfer Resource Center also brings admissions representatives from four-year institutions to Central Piedmont to talk with prospective transfer students through a program called Transfer Tuesdays. In addition to individual college visits, the office hosts a college transfer fair each

semester, bringing representatives from colleges and universities from across North Carolina and the southeast to Central Piedmont.

The Transfer Resource Center is located on the third floor of the Central High Building on Central Campus. Transfer advisors also are available at the Student Success Centers on Levine, Cato and Merancas campuses. For more information regarding transferring, advising and programs sponsored by the Transfer Resource Center, students should visit the Transfer Resource Center website.

## TRIO Student Support Services

TRIO - Student Support Services is funded by the U.S. Department of Education to provide opportunities for academic development to first generation, low-income and/or students with disabilities enrolled at Central Piedmont. Student Support Services is a college retention and degree completion program centered on academic, personal, social and career support for under-resourced college students. Services include:

- academic and personal coaching
- academic tutoring
- scholarship information and financial aid application assistance
- financial literacy instruction
- information on the college transfer process
- and more

For more information about the Central Piedmont TRIO - SSS program:

- visit the program office in Room 117 of the Central High Building on Central Campus
- view the Student Support Services-TRIO website
- call 704.330.6394

## Veterans Resources

### Centers for Military Families and Veterans

Centers for Military Families and Veterans on Central Piedmont campuses are places where armed forces members (including National Guards/Reservists), veterans and their immediate family members engage in services promoting their personal and professional development. They provide resources that address many aspects of education, military and civilian life. Services provided by the centers include:

- academic advising
- assistance filing a VA claim
- career coaching
- computer lab with study space
- goal-setting
- personal counseling
- Student Veterans of America Association
- welcoming reception area and social lounge
- workshops on well-being

For more information, visit the Center for Military Families and Veterans in Room 323 of Central High on Central Campus. Office hours are Monday through Friday, 8 a.m. through 5 p.m. The center also may be reached by phone at 704.330.6126 or online from the Center for Military Families and Veterans website.

## Financial Aid and Scholarships

Veteran students are encouraged to apply for financial aid and scholarships. Scholarships are provided through Central Piedmont's Foundation and the generosity of industries, businesses, professional organizations, civic clubs and individuals. Visit the following websites for information on financial aid:

Federal Application for Student Aid (FAFSA)  
 Central Piedmont Financial Aid website  
 Central Piedmont Scholarships

## Tuition Assistance

Tuition Assistance is processed through the Sponsored Programs Office at Central Piedmont. The office may be reached at 704.330.4262 or by email at sponsoredprograms@cpcc.edu.

The Department of Defense does not authorize tuition assistance for classes for which a member also is receiving education benefits under:

- the Montgomery GI Bill - Selected Reserve program (chapter 1606 of title 10, United States Code),
- the Reserve Educational Assistance Program (chapter 1607 of title 10, United States Code),
- or any GI Bill programs other than either the Montgomery GI Bill - Active Duty program (chapter 30 of title 38, United States Code) or the Post-9/11 GI Bill Program (chapter 33 of title 38, United States Code).

## Servicemembers Opportunity Colleges (SOC)

Central Piedmont has been designated as an institutional member of Servicemembers Opportunity Colleges (SOC), a group of more than 1,900 institutions pledged to working with servicemembers and veterans pursuing degrees. As a SOC member, Central Piedmont is committed to easing the transfer of relevant course credits and crediting education from appropriate military training. SOC has been developed jointly by educational representatives of each of the armed services, the Office of the Secretary of Defense and a consortium of 13 leading national higher education associations. It is sponsored by the American Association of State Colleges and Universities and the American Association of Community Colleges.

See the section on Veterans Affairs Educational Benefits (p. 84) for all details about the following VA education benefits:

- Eligibility, Enrollment Certification Process
- Verification of Enrollment
- Notification from the Department of Veteran Affairs
- SAP - Satisfactory Academic Progress
- Graduation
- Changes to: Contact Information, Enrollment Status, Program of Study

See the section on **Veterans Education Benefits Regulations** for all regulations about the following VA education benefits:

- Chapter 30: Montgomery GI Bill, Active Duty
- Chapter 31: Training and Rehabilitation for Veterans with Service-Connected Disabilities
- Chapter 33: Fry Scholarship
- Chapter 33: Post-9/11 GI Bill



- Chapter 33: Transfer of Post-9/11 GI-Bill Benefits to Dependents (TEB/TOE)
- Chapter 35: Dependents and Survivors Educational Assistance
- Chapter 1606: Educational Assistance for Members of the Selected Reserve
- Veterans Access, Choice, and Accountability Act of 2014

## Veterans Affairs Education Benefits

**Note:** All policies are subject to change based on institutional and federal guidelines.

### Quick Reference:

Eligibility, Enrollment Certification Process (22-1999) (p. 84)  
Verification of Enrollment (Chapters 30, 1606 and 1607) (p. 85)  
Notification from the Department of Veterans Affairs (p. 85)  
Satisfactory Academic Progress (SAP) (p. 85)  
Changes to: Address/Phone Information, Enrollment Status,  
Program of Study (p. 86)  
Websites for Further Information (p. 87)

Central Piedmont is extremely proud of its long-standing relationship with the men and women in uniform that bravely serve this country, those who have served, and their families. The mission of the Central Piedmont Veterans Affairs Education Benefits Office is to enhance the educational experience of veterans and eligible family members by providing access to education benefits within a supportive environment. Central Piedmont is dedicated to providing the highest quality and comprehensive support to student veterans in an atmosphere that provides commitment, respect and academic excellence.

Central Piedmont is approved by the North Carolina State Approving Agency for the enrollment of persons eligible for education assistance benefits from the U.S. Department of Veteran Affairs. The college provides training opportunities for veterans, eligible National Guard/Reservists, and eligible dependents (spouse and/or children).

For additional information regarding these benefits, which are administered by the United States Department of Veterans Affairs, contact one of the following offices:

- U.S. Department of Veterans Affairs - 1.888.442.4551
- Mecklenburg County Veterans Service Office - 704.336.2102
- District Office of the North Carolina Division of Veterans Affairs - 704.563.2037
- Central Piedmont Veterans Affairs Education Benefits Office - 704.330.6552
- Central Piedmont Center for Military Families and Veterans - 704.330.6126

### Priority Registration for Veteran Students

Central Piedmont offers priority registration to students using veterans' benefits and veterans who submit a member 4 copy of their DD214 to Student Records. Veteran students are encouraged to register early to achieve timely program completion and certification processing.

### Eligibility for Enrollment Certification Process (Electronic Form 22-1999)

Veteran students are in the unique position of having to meet requirements as specified by both the Department of Veterans Affairs and the North Carolina State Approving Agency (NCSAA). Although Central Piedmont Veterans Affairs Office does not work for the Department of Veterans Affairs, it works closely with them to ensure students' needs are met. The college strives to meet the DVA goal of "Putting Veterans First."

**For eligibility to receive VA education benefits, students are required to complete the following 6 steps:**

#### 1. Apply for VA education benefits.

All Veterans, National Guard/Selected Reserve and Survivors and Dependents of Disabled Veterans can apply online for benefits. Applications are available at [ebenefits.va.gov](http://ebenefits.va.gov). From there, applicants are directed to the eBenefits website, for the online application. A Certificate of Eligibility from the Department of Veteran Affairs is sent to the student after the application is processed.

#### 2. Complete all Central Piedmont admission steps.

All admission steps are found under Veterans from Get Started on the Central Piedmont home page.

#### 3. Submit official transcripts to Central Piedmont Records for evaluation.

Request official copies of high school, military and all prior college transcripts to be sent to Student Records in the Central High Building along with the Member 4 copy of the DD214.

#### Evaluation of Transcripts

Students receiving Veterans Affairs education benefits need to request official academic transcripts be sent from all previous schools to the Central Piedmont Student Records Office, regardless of whether they received credit for the courses. VA regulations require that all prior college credit be evaluated toward the student's current degree plan and re-evaluated if/when the student changes programs or place of training. **Students are not eligible to be certified for any course for which they already have received credit**, even if the course was completed prior to the establishment of eligibility for benefits.

**Important Notice: A VA file is not complete until all official high school, military (including DD214 member 4 copy) and college transcripts are evaluated** by the Student Records office.

#### 4. Meet with an Academic Counselor to be admitted into a VA Approved Program of Study.

#### Selection of Degree Program

In order to receive veterans affairs education benefits, VA regulations require that students have a "predetermined and identified educational, professional or vocational objective." Benefits cannot be authorized for courses which do not lead to the completion of this objective. Courses which do not apply to the selected program are considered unrelated courses and are not eligible for benefits. Therefore, any such courses will not be certified. Since only required courses can be certified, students need to access their MyCollege account with their student ID and password to run a report and confirm all

courses are required for their program of study before they register for classes.

**Important Notice:** Chapter 35 students must pursue a degree program to be eligible for certification in virtual/distance learning courses. Chapter 35 students seeking a diploma or certificate are not eligible to be certified for virtual courses, per federal regulations.

#### Developmental Courses

Per Federal guidelines, all developmental courses and labs need to be taken in seated classroom settings for VA certification. Developmental courses offered online as Internet and/or telecourse-blended seated classes with an online lab component are not eligible for certification for Veterans Affairs education benefits. Developmental courses are courses with numbers less than 100 such as DRE 096, DMA 020, etc.

#### Dual Degrees

Central Piedmont is approved for VA students to pursue dual degrees simultaneously. Diplomas and certificates do not qualify for the dual degree program. Students must meet certain criteria to be certified for Veterans Affairs benefits while seeking two degrees. Students desiring a second degree should contact the Veterans Affairs Education Benefits Office (VAEBO) for more information.

#### 5. Submit forms for education benefits.

Students are required to complete and submit a VA Student Packet along with other required documents to the VAEBO. The VA Student Packets are located at [cpcc.edu/veterans](http://cpcc.edu/veterans). Click on the FORMS tab and access the packet for the type of benefit that utilized at Central Piedmont. The original signed forms are required to be submitted to the Central Piedmont VA office.

#### 6. Attend a mandatory VA Annual Certification Workshop to be eligible for certification.

Students are required to attend a VA Annual Certification Workshop each academic year to meet the requirements for VA certification of education benefits. The purpose of the annual workshop is to inform students of:

- VA regulations that may affect their eligibility for certification,
- VA and college attendance policies, and
- how to avoid financial liabilities.

The schedule for the VA Annual Certification Workshop is posted online at [cpcc.edu/veterans](http://cpcc.edu/veterans).

#### Verification of Enrollment (Chapters 30, 1606 and 1607)

After the Veterans Affairs Education Benefits Office has certified a student's enrollment to the VA Regional Processing Office, **students using Chapter 30, 1606 and 1607 benefits need to verify their hours have not changed. This action is required on the last calendar day of each month** by calling 877.823.2378 or by using WAVE (Web Automated Verification of Enrollment) through [benefits.va.gov/gibill/](http://benefits.va.gov/gibill/).

To prevent student debt, the Central Piedmont Veterans Affairs Education Benefits Office is responsible for transmitting all changes of enrollment,

immediately to the VA Regional Processing Office. Students are responsible for notifying the Veterans Affairs Education Benefits Office immediately:

1. when changes are made to their enrollment, and
2. to complete a VA Schedule Adjustment Form.

#### Notification from the Department of Veterans Affairs

All enrollment certifications are electronically transmitted through the VA Once Reporting System. The Department of VA transmits an electronic message directly to a students' Central Piedmont email account when any type of activity is transmitted by a VA Certifying Official to the VA Regional Processing office. **A student's Central Piedmont email address is the official means of communication from the college.** It is always important to notify the Department of Veterans Affairs, the Central Piedmont Veterans Affairs Education Benefits Office and the Student Records Department of address, phone number or email address changes to prevent delays in communication.

#### Satisfactory Academic Progress (SAP)

VA education benefits are discontinued for students who cease to make satisfactory progress toward completion of their program. Veterans and eligible dependents/spouses are required to seek academic assistance by contacting their instructor, counselor, advisor, or the Center for Military Families and Veterans before academic difficulties place them on "Probation" or "Suspension." **A grade point average at the end of each semester/term of 2.0 or higher is required to meet the criteria for satisfactory academic progress for VA eligibility.**

**Unsatisfactory Attendance:** Unsatisfactory attendance in courses may result in an administrative withdrawal. An administrative withdrawal is reported to the VA Regional Office and education benefits are discontinued at that time. **It is important for students to contact the VAEBO if they have absences of more than two weeks and/or have stopped attending.**

**Satisfactory Progress:** Students receiving VA education benefits need to maintain a minimum grade point average (GPA) of 2.000 to be considered making satisfactory progress.

**Pass** – A grade of "P" (Pass) is used for successful completion of DMA or DRE courses. The grade of "P" is included in a student's SAP calculation as attempted and completed credit hours.

**Fail** - A grade of "R" (Fail) is used for unsuccessful completion of DMA or DRE courses. The grade of "R" is included in a student's SAP calculation as attempted and not completed credit hours with a GPA of 0.0.

If a veteran student requesting benefits is currently on "Probation" or "Suspension", a notification is sent to the student's Central Piedmont email. If the student is on Suspension, eligibility is terminated until the student meets the Standards of Academic Progress required to regain eligibility for VA education benefits.

**Unsatisfactory Progress, Probation:** Students who fail to achieve a semester GPA of 2.0 are placed on academic probation for the next semester. Students on probation are required to attend an On Track meeting with a counselor in the Center for Military Families and Veterans during the probationary term before they can be certified.

**Unsatisfactory Progress, Suspension:** If a student on VA probation fails to achieve a semester GPA of 2.0 at the end of the first probationary semester, the student is reported to the Veterans Affairs Regional Office

as terminated due to unsatisfactory progress. The student is no longer eligible for certification until both the term and cumulative GPA is brought up to a 2.0. VA Education benefits are discontinued by the Department of Veterans Affairs for any student reported for unsatisfactory progress. These standards are in accordance with the Department of Veterans Affairs Code of Federal Regulations, Title 38, Part 21, Sub-part D, Section 21.4277.

**Failing Grades:** Veteran students who complete a course but earn a grade of "F", may still receive VA benefits. Any student who does not complete the final exam and does not attend class through the last scheduled day receives an unearned grade of "F". The VA Regional Office is notified of any student who fails to attend class and fails to take the final exam and such students are classified as having received an over payment of funds. Any over payment is the student's responsibility. VA students may receive benefits to retake a required course if they previously received a failing grade.

**Note:** Courses completed with a grade of "D" cannot be re-certified if the college accepts the grade toward graduation.

**Graduation:** Students applying for Graduation must inform the Central Piedmont VA Education Benefits Office once they have verified they are in their last semester at the college. If students need additional hours for full-time status, they can be certified for all courses (whether or not in program of study) they are taking during their graduating semester. This benefit may be used only once at Central Piedmont. Previously passed courses or courses transferred in from other colleges cannot be certified.

#### **Changes to: Address/Phone Information, Enrollment Status, Program of Study**

##### **Changes to Address/Phone Number**

To report a change of address/phone number, veteran students should update their address/phone number through the Student Records Department or at [mycollege.cpcc.edu](mailto:mycollege.cpcc.edu), email the Veterans Affairs Education Benefits Office at [veteransaffairs@cpcc.edu](mailto:veteransaffairs@cpcc.edu) and contact the VA Regional Office at 1.888.442.4551.

Veteran students are responsible for and required to notify the Central Piedmont Veterans Affairs Education Benefits Office immediately of any withdrawals, attendance issues, change of address, phone number or email address, pending or approved program changes, course substitutions and/or waivers and graduation. Veteran students are responsible to the US Department of Veterans Affairs for repaying over payments.

##### **Change of Enrollment Status**

- **Withdrawn, Non-Attendance:** It is the student's responsibility to report all withdrawals or attendance issues to the Central Piedmont Veterans Affairs Education Benefits Office immediately to prevent over payments. Students are required to complete a **VA Schedule Adjustment form** within five business days of the change in enrollment. The last date of attendance must be verified by the instructor for all withdrawals. VA students are allowed a one-time penalty exclusion by the VA Regional Processing Office for officially withdrawing up to six credit hours. Students can be paid up to the last instructor-confirmed date of attendance for those six hours. This exclusion must be approved and processed by the Department of Veterans Affairs. After that time, students must provide the VA Regional Processing

Office in Buffalo, New York, with mitigating circumstances or repay any benefits received. If the student attends classes throughout the semester and receives a "W" (non-punitive) grade, this must be reported to the VA Regional Processing Office and is not part of the six-hour, one-time exclusion - even if a student can document attendance through the last day of class. Students are responsible for over payments resulting from non-punitive grades. Failure to notify the Central Piedmont VA Education Benefits Office of withdrawals and continued acceptance of educational funds may be considered fraud. Students are encouraged to register only for those classes they know they can complete.

- **Withdrawn, Never Attended** - A grade of "WN" is assigned when a student registers for a class and never attends the class prior to the census date. "WN" grades are not included in the SAP calculation as attempted credit hours or assigned any GPA rating. The Department of VA does not pay education benefits for any courses assigned a "WN" grade.

##### **Change in Program of Study**

Changes in program of study must be submitted to the VA Regional Processing Office by the Veterans Affairs Certifying Official. This is necessary because re-evaluation of all prior credits earned must be completed to ensure their full utilization. VA students can be certified only for courses fully accepted for their program of study as reflected in the college catalog. VA students desiring a program change should contact a VA Certifying Official, first. However, all program changes are initiated through Academic Counseling Services or a counselor in the Center for Military Families and Veterans and the required form must be completed:

- Application for Change of Program, VA Form 22-1995 (Veterans, National Guard/Reservists, CH 33 Transfer of Entitlement)
- Application for Change of Program, VA Form 22-5495 (Dependent/Spouse & Fry Scholarship).

This form is accepted only after the program code has been officially updated by an Academic or VA Counselor.

##### **Double Majors and Dual Objectives**

Students using Veterans Affairs (VA) educational benefits generally are approved for only one program of study at a time. However, exceptions can be made for students pursuing two programs at the same school, if the veteran can provide reasonable justification that both programs apply to a single career field.

##### **Double Major or Dual Objective**

- Students have a **double major** when they are enrolled in two degrees at the same time, at the same school.
- Students have a **dual objective** when they are enrolled in and pursue a degree and a Non-College Degree (NCD) (certificate or diploma) at the same time, at the same school.

##### **Conditions Permitting Double Majors or Dual Objectives**

- School policy allows double majors and/or dual objectives
- Both programs are approved at the school by the North Carolina State Approving Agency (NCSAA)

- Both programs reasonably can be said to lead to the same career field  
**NOTE:** Veterans Affairs now states that a general Associate in Arts or Associate in Science program may be used as a double major with most other programs, as they can reasonably relate to any career field. Two Associate in Applied Science degrees still must be reasonably related to the same career field.

**Conditions When Double Majors or Dual Objectives are Not Permitted:**

- Students cannot enroll in two Non-College Degree programs (certificate or diploma)
- Ch35 students cannot be certified for a dual objective (i.e., a combined program with a degree and an NCD certificate or diploma program) - although, they can be certified for double majors
- If either program is not approved by the NCSAA

**VA forms available at** [benefits.va.gov/gibill/](http://benefits.va.gov/gibill/) are:

1. VA Form 22-0296 - Direct Deposit Enrollment
2. VA Form 22-1995 - Application for Change of Program or Place of Training – Veterans, National Guard/Reservists, Transfer of Entitlement
3. VA Form 22-5495 - Application for Change of Program or Place of Training for Survivors' and Dependents' Educational Assistance, Fry Scholarship

**Websites for Further Information**

American Legion: [legion.org/](http://legion.org/)  
 Apply for financial aid: [fafsa.ed.gov](http://fafsa.ed.gov)  
 DD 214 online request: [vetrecs.archives.gov](http://vetrecs.archives.gov)  
 Department of Veterans Affairs: [va.gov/](http://va.gov/)  
 Disabled American Veterans: [dav.org/](http://dav.org/)  
 Education Benefits online application: [ebenefits.va.gov](http://ebenefits.va.gov)  
 GI Bill Programs, Pay Rates, Applications, Forms: [benefits.va.gov/gibill/](http://benefits.va.gov/gibill/)  
 Returning service members: [oefoif.va.gov/](http://oefoif.va.gov/)  
 VA Vocational Rehabilitation: [benefits.va.gov/vocrehab/](http://benefits.va.gov/vocrehab/)  
 Veterans' Benefits Administration: [vba.va.gov/](http://vba.va.gov/)

## Veterans Education Benefits Regulations

**DOD Change to Tuition Assistance Program**

The Department of Defense (DOD) no longer authorizes tuition assistance for classes for which a member also is receiving education benefits **under the following:**

- The Montgomery GI Bill - Selected Reserve program (chapter 1606 of title 10, United States Code),
- The Reserve Educational Assistance Program (chapter 1607 of title 10, United States Code), or
- Any GI Bill programs other than either the Montgomery GI Bill - Active Duty program (chapter 30 of title 38, United States Code) or the Post-9/11 GI Bill program (chapter 33 of title 38, United States Code).

**Forever GI Bill - Harry W. Colmery Veterans Educational Assistance Act**

The majority of the changes enhance or expand education benefits for veterans, service members, families and survivors. For additional information, visit [benefits.va.gov/gibill/forevergibill.asp](http://benefits.va.gov/gibill/forevergibill.asp).

The 15-year time limitation to use Post-9/11 GI Bill benefits is eliminated for:

- veterans who left active duty on or after January 1, 2013,
- children who became eligible for the Fry Scholarship on or after January 1, 2013, and
- all Fry scholarship eligible spouses.

**Veteran Benefits and Transaction Act of 2018**

Veteran students who are GI Bill and VR&E (Chapter 33 and Chapter 31) beneficiaries may attend a course of education or training for up to 90 days from the date the beneficiary provides a certificate of eligibility or valid VAF 28-1905 to the VA Certifying Official. This allows the student to attend the course until the Department of Veterans Affairs (VA) provides payment to the college. Chapter 33 and Chapter 31 beneficiaries will not be imposed a penalty nor be required to borrow additional funds to cover tuition and fees, due to late payments from the Department of Veterans Affairs.

Section 103 requires a State Approving Agency (SAA), or the VA, when acting in the role of the SAA, to disapprove certain courses of education. The VA can grant a waiver to these requirements.

Related information is included in Central Piedmont policies 7.03 In-State Tuition Requirements, and 7.08 Tuition and Registration Fee Refunds.

**Veterans Access, Choice, and Accountability Act of 2014**

**"Choice Act" as it pertains to the in-state tuition provision – Section 702.**

To remain approved for VA's GI Bill programs, **NC schools must charge in-state tuition and fee amounts to "covered individuals,"** as described, to include same-sex spouses and children (biological, adopted, pre-adoptive and stepchildren of same-sex spouses) for terms that start after 7/1/15.

**As of July 1, 2017, a "covered individual" is defined in the Choice Act as:**

- A Veteran using Montgomery GI Bill-AD (CH30), Post 9/11 GI Bill (CH33), or VA/VR (CH31) who lives in a state in which the college is located (regardless of legal state of residence) and enrolls in the school within three years of discharge from a qualifying period of active duty service of 90 days or more
- Anyone using transferred CH33 Post-9/11 GI Bill benefits (TOE) who lives in a state in which the college is located (regardless of legal state of residence) and enrolls in the school within three years of discharge from a qualifying period of active duty service of 90 days or more
- A spouse or child of an active duty member using transferred benefits who lives in the state in which the college is located (regardless of legal state of residence)
- A spouse or child using benefits under the CH33 Marine Gunnery Sergeant John David Fry Scholarship (FRY) who lives in the state in which the college is located (regardless of legal state of residence)

**IMPORTANT:** Individuals who initially meet the above requirements maintain "covered status", even if they are outside the three-year window or change programs, as long as they continue to use Post-9/11 GI Bill (CH33), Montgomery GI Bill-Active Duty (MGB-AD CH30), or VA



Vocational Rehabilitation (CH31) benefits and remain *continuously enrolled at the same institution* of higher learning. Continuity of enrollment is not broken by regularly scheduled breaks between courses, semesters, or terms. VA students do not need to enroll in summer sessions to maintain continuous enrollment.

#### **Situations Not Covered by the Choice Act:**

- Once students changes schools, they are no longer covered under Section 702
- Service members on active duty are not eligible for the Choice Act

#### **Chapter 30: Montgomery GI Bill, Active Duty**

Persons who first entered active duty after June 30, 1985, are generally eligible. Some Vietnam Era veterans and certain veterans separated under special programs are also eligible. The veteran needs to have received an honorable discharge and continuously served for three years, or two years, if first enlisted for that, or two years of an obligation to serve four years in the Selected Reserve and must have entered the Selected Reserve within a year of leaving active duty. The MGIB program provides up to 36 months of education benefits. Generally, benefits are payable for 10 years following release from active duty.

#### **Chapter 31: Training and Rehabilitation for Veterans with Service-Connected Disabilities**

Veterans Affairs Vocational Rehabilitation is a program whose primary function is to help veterans with service connected disabilities become suitably employed, maintain employment and achieve independence in daily living.

The program offers a number of services to help each eligible disabled veteran reach his or her rehabilitation goal. These services include vocational and personal counseling, education and training, financial aid, job assistance, and if needed, medical and dental treatment. Services generally last up to 48 months and can be extended in certain instances.

To be eligible, the veteran should first be awarded a monthly VA disability compensation payment (in most cases) and must have received or will receive a discharge that is other than dishonorable. Eligibility is also based on meeting the following conditions:

- Have received an honorable or other than dishonorable discharge
- Have a VA service-connected disability rating of 10 percent or more
- Veteran needs Vocational Rehabilitation to overcome an employment handicap
- It has been less than 12 years since VA notified the veteran of the qualified SCD

Detailed information and the online application can be found at [benefits.va.gov/vocrehab/](http://benefits.va.gov/vocrehab/) or contact the VA Vocational Rehabilitation Office, 251 North Main Street, Winston-Salem, NC 27155. Telephone: 800.827.1000

#### **Chapter 33: Post 9/11 GI Bill**

The Post-9/11 GI Bill is an education benefit program for individuals who served at least 90 days of aggregate service after September 10, 2001. To be eligible for 100 percent of the benefit, an individual should have served an aggregate of 36 months of active duty service or have been discharged for a service-connected disability after 30 days of continuous service. Post-9/11 GI Bill benefits are payable for training pursued on or after August 1, 2009. No payments can be made under this program for training

pursued before that date. Once individuals elect to receive benefits under the Post-9/11 GI Bill, they are no longer eligible to receive benefits under the program from which they elected the Post-9/11 GI Bill. Individuals should carefully consider their educational goals before applying and electing benefits under the Post-9/11 GI Bill. Service members whose last date of active duty is on or after January 1, 2013, do not have a delimiting date for their benefit. Service members who separated prior to January 1, 2013, have 15 years from their last date of active duty to use their benefit. **Important Note** - The \$600 Buy Up is not payable under the Post-9/11 GI Bill.

#### **Chapter 33: Transfer of Post 9/11 GI Bill - Benefits to Dependents (TEB/TOE)**

For the first time in history, service members enrolled in the Post-9/11 GI Bill Program are able to transfer unused education benefits to their spouses or children starting August 1, 2009. Department of Defense guidance, issued June 23, 2009, establishes the criteria for eligibility and transfer of those education benefits.

For details regarding eligibility for this transfer, go to [gibill.va.gov](http://gibill.va.gov). All applications will be submitted through the Transferability of Educational Benefits (TEB) website located at [dmdc.osd.mil/TEB/](http://dmdc.osd.mil/TEB/). An individual approved to transfer an entitlement to educational assistance under this section may transfer the individual's entitlement to:

- The individual's spouse
- One or more of the individual's children
- Any combination of spouse and child
- An eligible service member may transfer up to the total months of unused Post-9/11 GI Bill benefits, or the entire 36 months if the member hasn't used any months. A family member should be enrolled in the Defense Eligibility Enrollment Reporting Systems (DEERS) and be eligible for benefits, at the time of transfer to receive transferred educational benefits.

#### **Chapter 33: Fry Scholarship**

The Marine Gunnery Sergeant John David Fry Scholarship (Fry Scholarship) currently pays a benefit equal to the Post-9/11 GI Bill for children and spouses of soldiers who have died in the line of duty since September 10, 2001. Beneficiaries attending school may receive up to their full tuition and fees for a public school, plus a monthly living stipend and book allowance under this program with 36 months of entitlement.

- A surviving spouse can receive benefits for terms beginning on or after January 1, 2015. A spouse will lose eligibility for this benefit upon remarriage.
- Children are eligible for this benefit from age 18 – 33. A child's marital status has no effect on eligibility.
- Fry Scholarship recipients who become eligible on or after January 1, 2013, no longer have a delimiting date.

#### **Chapter 35: Dependents and Survivors Educational Assistance**

The Dependents Educational Assistance Program is an education benefit for eligible spouses and children of certain veterans. To be eligible, the student should be the spouse or child of a member of the Armed Forces who has died while on active duty or as the result of a disability that VA has determined is service-connected, or is 100 percent permanently and totally disabled for a service-related reason.

- Dependents, who enroll after August 1, 2018, receive 36 months of benefits. Recipients are usually between the ages of 18 to 26.
- For a spouse, benefits end 10 years from the date that the DVA declares eligibility or 20 years from the date of death of the veteran.

**Chapter 1606: Educational Assistance for Members of the Selected Reserve**

Chapter 1606 is for individuals in the Selected Reserve or National Guard. Members should have a six-year obligation to serve in the Selected Reserve signed after June 30, 1985. An officer will need to have agreed to serve six years in addition to original obligation. Eligible members need to complete initial active duty for training (IADT), obtain a high school diploma or equivalency before applying for benefits and remain in good standing while serving in an active Selected Reserve unit. The Department of Defense (DOD) is responsible for determining eligibility and issuing DD Form 2384-1 Notice of Basic Eligibility (NOBE). Tuition Assistance, awarded by the respective branch of service, may be available to members of the National Guard or Active Duty Personnel. Eligibility requirements are available at the member's unit command.

# Programs of Study





# Programs of Study



The cornerstone of the North Carolina Community College System is the preparation of students for entry into the workforce, for job changes and for career advancement to meet individual goals and regional needs. Central Piedmont offers career programs in a broad range of occupational areas. In addition, community colleges provide students opportunities to transfer to four-year colleges and universities. A commitment to affordability gives students the opportunity to earn a quality education at a fraction of the cost of other local higher education institutions.

To carry out the mission of the college, Central Piedmont offers educational programs among the broad learning domains below:

## Career & College Promise

Central Piedmont provides educational pathways for qualified high school students to complete college credits or technical training, tuition free, while they are in high school, allowing them to get a jump-start on their workplace and college preparation.

## College and Career Readiness Programs

A basic premise of the community college movement is the expansion of educational opportunities for all adults, including those facing academic barriers to success. The College and Career Readiness department offers pre-college courses to help students improve their skills before enrolling in college or seeking employment.

A variety of pre-college courses are offered in language arts, math, High School Equivalency preparation, Adult High School, English as a Second Language, and specialized programs that integrate occupational training with academic and job readiness. Programs also are offered at libraries, public schools, and community sites to target select populations, including newly arrived refugees, parents and the homeless.

## Developmental Studies

Developmental Studies are for students who have not reached college-level in the areas of English, reading, mathematics, biology or chemistry. Initial student placement in developmental courses is based on individual college placement testing policies and procedures.

## College Curriculum Programs of Study

### General Education Goals

The General Education Foundation refers to general education course requirements within all programs of study, which serve to:

1. provide a foundational exposure to disciplines,
2. develop a sense of self, society, global issues and civic engagement, and
3. provide exposure to and attainment of proficiency in CRITICAL CORE skills.

### Degree Programs, Diplomas and Certificates

#### Associate in Applied Science (A.A.S.) Degrees

The college offers two-year Associate in Applied Science (A.A.S.) degrees and shorter-term diploma and certificate programs. Graduates of these programs develop marketable employment and college-level academic skills. In some cases, courses within the programs are transferable to colleges and universities. Students may reach other career goals such as updating job skills, career advancement and re-entry into the workforce. In support of these programs, the college continues to form partnerships with business and industry.

#### College Transfer Programs to Four-Year Institutions

The college provides the first two years of study in the arts and sciences and pre-professional fields for students who wish to transfer to four-year colleges and universities in the Associate in Arts (A.A.), Associate in Science (A.S.), and Associate in Fine Arts (A.F.A.) degrees. Students are able to transfer a diploma or an associate degree to four-year colleges prepared with the background and skills necessary to succeed in further studies. Graduates have college-level academic skills and have successfully completed the general

## Corporate and Continuing Education

Corporate and Continuing Education is offered across college disciplines in relevant and popular topic areas through non-credit programming, events and services for individuals and employers. With flexibility in design, content and delivery, Corporate and Continuing Education plays a significant role in meeting the training needs of business and industry. Strong partnerships with governmental and community organizations allow the college to leverage multiple funding sources and to provide targeted and often hands-on skill training and knowledge to ensure a ready and reliable workforce.

For individuals, Corporate and Continuing Education offers year-round programming and services to help adults meet their professional and personal goals, including starting or growing a small business or preparing for retirement. Such a comprehensive selection allows individuals to earn certifications and courses for professional licensure, as well as to pursue recreational and leisure programs.

## Career and College Promise (CCP)

Career and College Promise was formerly three programs known as Cooperative High School, The College Experience Program, and Concurrent Enrollment.

Success in today's global economy may require a two-or four-year degree, a certificate or diploma. Through Career and College Promise



(CCP), qualified students of high school age in North Carolina have the opportunity to pursue these options, tuition free, while they are in high school, allowing them to get a jump-start on their workplace and college preparation.

To be eligible, high school students must meet with their career development coordinator or guidance counselor to determine if they are college-ready. Students must complete a college application to be admitted into a Career and College Promise pathway and must meet all prerequisites for the courses they choose.

For more information, visit the Career and College Promise website at [cpcc.edu/hsprograms](http://cpcc.edu/hsprograms).

**Career and College Promise provides the following educational or career training pathways for students while they are still in high school:**

**Cooperative Innovative High School Programs** are located on college campuses or approved locations in Charlotte-Mecklenburg Schools. They enroll 100 or fewer students per grade level and provide opportunities for students to complete an associate degree program or earn up to two years of college credit within five years. Eligibility requirements for Cooperative Innovative High School Programs are established by the local board of education and local boards of trustees.

Specific criteria and eligibility requirements can be found in Part II (Operating Procedures) of the Procedures Reference Manual for Career and College Promise on the North Carolina Community Colleges website at [nccommunitycolleges.edu/career-and-college-promise-ccp](http://nccommunitycolleges.edu/career-and-college-promise-ccp).

**College Credit Transfer Pathways** provide tuition-free courses that transfer seamlessly to any public or participating private college or university, saving successful students time and money in pursuing four-year degrees.

**Career Technical Pathways** lead to a certificate or diploma aligned with a high school career cluster.

## College and Career Readiness Programs

The College and Career Readiness (CCR) department provides academic, job readiness and college-prep opportunities for students to engage in exploring, choosing and moving successfully toward or into the career or college/training program of their choice. The CCR staff and faculty is committed to helping students develop the vital knowledge and skills required for future success in additional education or employment. Students are encouraged and supported in the development of an individual career path to help them track their educational and career development progress.

To ensure a successful transition into a post-secondary education institution or the workforce, CCR faculty and staff guide students through an assortment of CCR courses, including college and career-focused programs, high school completion, English as a Second Language and Special Learning Needs. Career awareness and work-related skills are integrated into all instruction to help students see the relevancy and application of what they are learning.

Advising for College and Career Readiness (p. 92)  
English Classes (ESL) (p. 92)  
Refugee Education (p. 93)

Independence and Literacy Education for Adults with Disabilities (I-LEAD) (p. 93)

### High School Credentials

Adult High School Diploma (p. 93)  
High School Equivalency (HSE) Instruction (p. 93)  
High School Equivalency (HSE) Testing (p. 93)

### Workplace and Career Readiness

Accelerated Career Training (ACT) (p. 94)  
Career Development (p. 94)  
NC Works NextGen (p. 94)  
Pathways to Careers (p. 94)  
Rise 2 Work (p. 95)  
Working in America

## Advising for College and Career Readiness

The College and Career Readiness (CCR) department is committed to ensuring the success of students. CCR advisors help students establish and fulfill their educational and career goals through career research and educational planning. Assigned advisors assist students with all academic questions, plans and progress throughout their educational experience. Services are available to new and currently enrolled students.

New students: contact staff for College and Career Readiness Advising on Central Piedmont campuses and follow the 3 easy steps to get started.

Assistance also is available at 704.330.6129. *All phone messages will be returned within 24 hours during business hours, Monday through Friday.*

The CCR team looks forward to assisting students in their educational journey.

## Adult English as a Second Language (Adult ESL)

Adult English as a Second Language (ESL) non-credit courses focus on helping students obtain a level of English language proficiency that allows them to meet personal and professional goals. Instruction is provided by professionals trained to teach students from diverse cultural, geographical and linguistic backgrounds. Coursework is tailored to reflect the goals of the students and helps prepare students for further academic study, employment and/or citizenship. Higher level students begin to develop the cognitive academic language proficiency needed to make these transitions.

Courses are free of charge to students. Eligible students also may choose to enroll in Working in America, a career-infused program that combines English language acquisition with job readiness and short-term training leading to jobs in high-demand fields. For more information, call the Adult ESL department at 704.330.6172.

- ESL College and Career (ECC) Courses (p. 258)
- ESL Community (ECO) Courses (p. 259)
- ESL Crossroads Cafe (CDL) Courses (p. 258)
- ESL Distance Learning (EDL) Courses (p. 259)
- ESL Integrated Learning Resource (ILR) Courses (p. 259)
- ESL Transitions (EST) Courses (p. 259)

- **Refugee Education Program (ELT)**
- **Working in America (ECV) Courses**

## Refugee Education

Students with refugee, asylee or special immigration visa (SIV) status qualify for dedicated services for enrollment and navigation of all areas of the college.

Goals of the Central Piedmont Refugee Education Program are to:

- offer a comprehensive educational support program for diverse groups of adult refugees in the Charlotte-Mecklenburg community
- provide English language instruction throughout the Charlotte-Mecklenburg community to meet specific and defined language, employment and family needs of adult refugees
- offer vocational education to provide refugees with the skills in demand by local employers

For more information, please email Lindsay LaPlante, program coordinator for Refugee Education, at [lindsay.laplante@cpcc.edu](mailto:lindsay.laplante@cpcc.edu).

## Independence and Literacy Education for Adults with Disabilities (I-LEAD)

I-LEAD (Independence and Literacy Education for Adults with Disabilities) serves adults with intellectual disabilities by combining literacy, independent living skills and employability skills.

The program's hands-on and interactive classes are free of charge. Classes take place on Central Campus as well as community sites. The classes focus on areas such as employment, budgeting, transportation and daily living.

Program participants learn from instructors who understand their learning needs and design classes focused on the following areas:

- Community Living
- Functional Academics
- Health and Safety
- Leisure and Humanities

Participants who successfully complete I-LEAD may apply for the on-campus Transitions class or Project Search, a one-year internship class.

### I-LEAD Courses

- I-LEAD (FED) Courses (p. 266)
- I-LEAD Foundational Community (FCO) Courses (p. 266)

## Adult High School Diploma

The Adult High School (AHS) Diploma program offers students a chance to earn the credits they need to complete a high school education. Students meet with an advisor to evaluate their transcript and determine the classes required to earn an Adult High School Diploma issued jointly through Charlotte-Mecklenburg Schools and Central Piedmont. There is no charge for classes. The program also is offered online. A strict

attendance policy is enforced for all AHS courses. For more information, call College and Career Readiness Programs at 704.330.6129.

## Adult High School

- Adult High School (HSD) Courses (p. 259)
- Adult High School Learning Resource (HLR) Courses (p. 264)

An Adult High School Diploma is awarded jointly through Charlotte-Mecklenburg Schools (CMS) and Central Piedmont. An accumulation of 24 credits is needed to earn the diploma which is based on the current graduation requirements and an agreement with CMS. This agreement is subject to change.

## High School Equivalency (HSE) Instruction

The High School Equivalency test preparation offers students an opportunity to gain the knowledge and skills needed to successfully pass a nationally recognized high school equivalency test, including the GED® or HiSET® exam. Topics include science, math, social studies, reading and writing.

There is no charge for preparation classes; however, there is a fee for final testing. For more information, call the College and Career Readiness Programs at 704.330.6129.

## Course Options

- GED Learning Resource (GLR) Center (p. 265)
- High School Equivalency Community (HCO) Course (p. 265)
- High School Equivalency Distance Learning (HDL) Course (p. 265)
- High School Equivalency Language Arts (HLA) Course (p. 265)
- **High School Equivalency Math (HMA) Course**
- **High School Equivalency Science (HSI) Course**
- High School Equivalency Social Studies (HSS) Course (p. 266)

Central Piedmont offers two assessment options for earning a High School Equivalency Diploma. Applicants can take either the:

1. General Educational Development (GED®) Test, or
2. High School Equivalency Test (HiSET®).

Successful passage of either test results in the same High School Equivalency Diploma issued by the North Carolina Community College System.

## High School Equivalency Testing

Central Piedmont offers two assessment options for earning a High School Equivalency Diploma. The two assessments cover the same content areas and allow test takers to demonstrate proficiency and the academic skills expected by employers and post-secondary institutions.

Applicants can take either the:

1. General Educational Development (GED®) Test
2. High School Equivalency Test (HiSET®)

Passing either of the two assessments in North Carolina results in the issuance of a High School Equivalency Diploma by the North Carolina State Board of Community Colleges.

Any person 18 and over may choose to take the GED® or HiSET®. Individuals who are 16 or 17 years of age must obtain approval to take the exam. The North Carolina High School Equivalency testing program requires all candidates 16 and 17 years of age to obtain special approval to take the High School Equivalency test.

To obtain transcripts or additional copies of a diploma, visit Diploma Sender.

## Accelerated Career Training (ACT)

The Accelerated Career (ACT) Program offers opportunities to attain meaningful employment for individuals in the Charlotte region who are unemployed, underemployed, and/or limited to low-wage jobs. Get **free** job training **fast** in these high-growth career paths:

- Call center or customer service representative
- Culinary Apprentice Certificate
- Early childhood teacher
- Information technology
- Healthcare — Nursing Assistant, Phlebotomy, and EKG Technician
- Entry-level construction in partnership with Goodwill Industries
- Transportation or commercial driver's license
- Heating / ventilation / air conditioning

For more information, contact Career Success Coach Brittany Roach at brittany.roach@cpcc.edu or at 704.330.4431 or Program Coordinator Samantha Smith at Samantha.Smith@cpcc.edu or at 704.330.2722, ext. 3817.

## Career Development

The Career Development (formerly HRD-Human Resources Development) program is designed to educate and train individuals to be successful in the workplace. This program provides career assessment, employability skills training and career advising to unemployed and underemployed adults. Courses taught in this program address:

- assessment of an individual's assets and limitations,
- development of a positive self-concept and employability skills,
- job search and job retention strategies,
- communication and problem solving skills, and
- information technology in the workplace.

Individuals also can earn Working Smart (soft skills) and Career Readiness Certifications.

### Eligibility

The classes are offered at **no cost** to individuals currently in one of the following situations:

- are unemployed,
- have received notice of a pending layoff,
- are working and are eligible for Federal Earned Income Tax Credit, or
- are working and earning at or below 200 percent of Federal Poverty Guidelines.

For more information, call the Career Development department at 704.330.2722, ext. 3885 or visit the Career Development website.

## NC Works NextGen

The NextGen Program (formerly Work and Learn) helps young adults, ages 16 to 24, gain work experience, enter the job market, complete educational goals and prepare for a career. The program targets young adults with one or more barriers to employment. NextGen provides career exploration, paid internships, help finding employment, and scholarships for training and certifications. Eligible students can earn their high school diploma while being enrolled in the college's occupational programs at the same time. The program is funded by the Workforce Innovation and Opportunity Act under contract with Charlotte Works.

For more information, call NextGen at 704.330.6794, or visit the NextGen website.

## Working Smart Certification

Working Smart certification is issued by Charlotte Works, Mecklenburg County's Workforce Development Board, to certify the recipient's employability skills related to self-awareness, self-management, work ethics, communication skills, and problem solving skills. Satisfactory completion of the Working Smart course is necessary to receive the certification.

## Career Readiness Certificate

The North Carolina Career Readiness Certificate (CRC) is a portable employability skills credential signed by the Governor. The CRC allows potential employees to distinguish themselves from other applicants or meet preferred or required qualifications for employers. Applicants must earn a designated score on three tests - Reading for Information, Locating Information, and Applied Math - to receive either a bronze, silver, or gold designation.

## Pathways to Careers

Pathways to Careers offers qualified students the unique opportunity to work toward completion of their high school equivalency diploma while receiving occupational and work readiness training. To ensure student success, the program provides a variety of student support services, academic advising, and training to help students transition to higher level certificates and degree programs or employment. More than 20 short-term training programs are available.

### Tuition Assistance

Tuition assistance is available for eligible students through the **Basic Skills Plus Program**. Under this program, students are responsible for the cost of supplies and other fees associated with their chosen pathway.

Other pathways offering full scholarship for all costs are available for eligible students through the **Accelerated Career Training (ACT) Program**.

## Pathways to Careers

- **Pathways A+ Certification (PWI) Courses**
- Pathways Computer Integrated Machining (PWM) Courses (p. 266)
- Pathways Developmental Disabilities (PWD) Courses (p. 267)
- Pathways Early Childhood Education (PWE) Courses (p. 267)
- Pathways Learning Resource (PLR) Courses (p. 267)
- Pathways Office Administration (PWO) Courses (p. 267)
- Pathways Welding (PWW) Courses (p. 267)

Pathways to Careers supports several Central Piedmont certificates in various high-demand career industries.\*

## Certificates

- Air Conditioning, Heating and Refrigeration Technology with a specialization in Heating Service (C35100-C1)
- Certified Nurse Aide I
- Commercial Truck Driving
- Computer Integrated Machining Technology with a specialization in Basic Machining Skills (C50210-C3)
- Construction (NCCER CORE credential)
- EKG Technician
- Emergency Medical Technician
- Housekeeping
- Human Services Technology with a specialization in Supported Employment (C4538A-C2)
- Natural Hair Care
- Office Administration Specialist (C25370-C5)
- Phlebotomy
- ServSafe and Culinary Boot Camp
- Welding Technology with a specialization in Entry-Level Welding (C50420-C2)

## Credentials

- Career Readiness Certificate
- NC State Early Childhood Credential
- PC PRO/COMPTIA A+ Certification

\*Certificates supported by Pathways to Careers may change.

## Rise 2 Work

The College and Career Readiness Department at Central Piedmont has launched Rise 2 Work, a Mecklenburg County Department of Social Services and North Carolina Division of Health and Human Services program that seeks to connect low-income residents with the education and training opportunities they need to secure a better-paying job or family-sustaining career.

Rise 2 Work is a grant-funded program that is available to individuals enrolled in Mecklenburg County Food & Nutrition Services Employment and Training Program who want to increase their skills, earn new credentials, boost their career possibilities, and contribute to their family financial well-being. To be eligible, residents must qualify to receive SNAP/EBT/Food Stamps assistance and be able to work.

For more information, contact Education Navigators:

Chasity Gardner, chasity.gardner@cpcc.edu and 704.330.2722, ext. 3139  
Eric Hill, eric.hill@cpcc.edu and 704.330.2722, ext. 3077.

## Developmental Studies

### Developmental Mathematics Courses

DMA 010	Operations With Integers	1.0
DMA 020	Fractions and Decimals	1.0

DMA 030	Proportion/Ratios/Rates/Percents	1.0
DMA 040	Expressions, Linear Equations, Linear Inequalities	1.0
DMA 050	Graphs and Equations of Lines	1.0
DMA 060	Polynomial and Quadratic Applications	1.0
DMA 070	Rational Expressions and Equations	1.0
DMA 080	Radical Expressions and Equations	1.0

### Developmental Reading and English Courses

DRE 096	Integrated Reading and Writing I	3.0
DRE 097	Integrated Reading and Writing II	3.0
DRE 098	Integrated Reading and Writing III	3.0

### ACA Academic Related Course

ACA 090	Student Success Strategies	3.0
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### Computer Information Technology Course

CTS 060	Essential Computer Usage	2.0
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### Chemistry Course

CHM 090	Chemistry Concepts	4.0
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### English as a Foreign Language Courses

EFL 050	English for Academic Purp	5.0
EFL 055	English for Special Purpo	3.0
EFL 062	Listening/Speaking II	5.0
EFL 063	Listening/Speaking III	5.0
EFL 064	Listening-Speaking IV	5.0
EFL 072	Reading II	5.0
EFL 073	Reading III	5.0
EFL 074	Reading IV	5.0
EFL 082	Grammar II	5.0
EFL 083	Grammar III	5.0
EFL 084	Grammar IV	5.0
EFL 092	Composition II	5.0
EFL 093	Composition III	5.0
EFL 094	Composition IV	5.0

## College Curriculum Programs of Study

Central Piedmont has developed a variety of affordable, two-year degree and distance learning programs that respond to the immediate needs of the local workforce within the areas of science, technology, engineering, math and many others.

### Developmental Studies

Developmental Studies are prerequisite courses for students who have not reached college-level in the areas of English, reading, mathematics, biology or chemistry. Each Developmental course has stated objectives and a system to help students accomplish those objectives. Initial student placement in Developmental courses is based on individual college placement testing policies and procedures. Students should begin Developmental course work at the appropriate level indicated by their



placement test. Each Developmental course has stated objectives and a system to help students accomplish those objectives.

## Central Piedmont General Education Goals

Successful completion of General Education foundation courses establishes critical core competencies for students in the areas of:

- 1) communication,
- 2) critical thinking,
- 3) personal growth and cultural literacy, and
- 4) information technology and quantitative literacy.

## College Transfer Programs

Transfer programs are for students interested in completing their general education requirements prior to transferring to a four-year institution. The programs offer courses comparable to the freshman and sophomore levels at four-year colleges and universities. Students are able to transfer a diploma or an associate degree to four-year colleges prepared with the background and skills necessary to succeed in further studies. Graduates possess college-level academic skills and have successfully completed the general education core curriculum. More information is available on the Transfer Resource Center website.

## Associate in Applied Science (A.A.S.) Degrees, Diplomas and Certificates

The college offers two-year Associate in Applied Science (A.A.S.) degree programs for students interested in completing a career-oriented program. Graduates of these programs develop marketable employment and college-level academic skills. In some cases, courses within the programs are transferable to colleges and universities.

The college also offers shorter-term diploma and certificate programs for students seeking other career goals such as updating job skills, career advancement or re-entry into the workforce. In support of these programs, the college continues to form partnerships with business and industry.

## Central Piedmont General Education Goals

Critical Core Competency	General Education Foundation Course Offerings	Student Learning Outcome
<b>COMMUNICATION</b>		
The ability to develop and effectively express in written and oral form ideas that are appropriate to audience and purpose.	ENG 111  COM 110/COM 231	Student collects, organizes, and analyzes subject-relevant information that results in written communication with minimal errors.  Student orally communicates in a clear, organized manner, which demonstrates awareness of audience.

Critical Core Competency	General Education Foundation Course Offerings	Student Learning Outcome
<b>CRITICAL THINKING</b>		
The ability to interpret, analyze, synthesize, or evaluate information, issues and ideas and apply creative thought to formulate an opinion, solve a problem or reach a conclusion.	ECO 251/ECO 252/ POL 120/PSY 150/ SOC 210  HIS 111/HIS 112/ HIS 131/HIS 132	Student selects and uses information appropriately to investigate a point of view or conclusion.  Student formulates and articulates a position.

Critical Core Competency	General Education Foundation Course Offerings	Student Learning Outcome
<b>PERSONAL GROWTH AND CULTURAL LITERACY</b>		
The ability to understand and manage self, to function effectively in social and professional environments, and to make reasoned judgments based on an understanding of the diversity of the world community.	ART 111/ART 114/ ART 115/MUS 110/ MUS 112  PHI 215/PHI 240/ HUM 120/HUM 130/ REL 110	Student demonstrates cultural awareness.  Student demonstrates ethical self-awareness.

Critical Core Competency	General Education Foundation Course Offerings	Student Learning Outcome
<b>INFORMATION TECHNOLOGY AND QUANTITATIVE LITERACY</b>		
The ability to locate, understand, evaluate, and synthesize information and data in a technology and data-driven society.	MAT 110/MAT 121/ MAT 152/MAT 263  MAT 143/MAT 171/ MAT 271	Student applies quantitative concepts to interpret data.  Student applies quantitative concepts to analyze data.

## College Transfer Programs

Students who intend to transfer to a four-year college or university should complete one of the following degrees:

1. An Associate in Arts (A.A.) Degree (A10100) (p. 98) which emphasizes the liberal arts,

2. An Associate in Engineering (A.E.) Degree (A10500) (p. 103) which emphasizes engineering technology,
3. An Associate in Fine Arts (A.F.A.) Degree in Music (A10700) (p. 104) which emphasizes music.
4. An Associate in Fine Arts (A.F.A.) Degree in Theatre (A10800) (p. 105) which emphasizes theatre.
5. An Associate in Fine Arts (A.F.A.) Degree in Visual Arts (A10600) (p. 106) which emphasizes art.
6. An Associate in Science (A.S.) Degree (A10400) (p. 107) which emphasizes science and mathematics,

2. **Additional general education, pre-major, and elective courses** that prepare students for successful transfer into selected majors at UNC institutions which bring the total number of hours in the degree programs to 60-61 semester hours.

To ensure maximum transferability of credits, students should select a transfer major and preferred transfer university before completing 30 semester hours of credit. Additional general education, pre-major, and elective courses should be selected based on a student's intended major and transfer institution. **(For additional information, students should check with the college or university to which they plan to transfer, or with a Central Piedmont transfer advisor.)**

Community college graduates of these programs who have earned 60 semester hours in approved transfer courses with a grade of "C" or better and an overall GPA of at least 2.0 on a 4.0 scale will receive at least 60 semester hours of academic credit upon admission to a university. Requirements for admission to some major programs may require additional pre-specialty courses beyond the courses taken at the community college. Students entering such programs may need more than two academic years of course work to complete the baccalaureate degree, depending on requirements of the program.

#### Public North Carolina Universities

- Appalachian State University
- East Carolina University
- Elizabeth City State University
- Fayetteville State University
- North Carolina Agricultural and Technical State University
- North Carolina Central University
- North Carolina State University
- University of North Carolina at Asheville
- University of North Carolina at Chapel Hill
- University of North Carolina at Charlotte
- University of North Carolina at Greensboro
- University of North Carolina at Pembroke
- University of North Carolina at Wilmington
- Western Carolina University
- Winston-Salem State University

#### Independent Colleges and Universities

- Barton College
- Belmont Abby College
- Bennett College
- Brevard College
- Campbell University
- Catawba College
- Chowan College
- Gardner-Webb University
- Johnson C. Smith University
- Lees-McRae College
- Livingstone College
- Louisburg College
- Mars Hill College
- Montreat College
- Mount Olive College

## Admission to a Transfer Program

New students wishing to enter a transfer program can visit the "Get Started" page at [CPCC.edu/getstarted/curriculum](http://CPCC.edu/getstarted/curriculum). (p. 96) Current students wishing to enter a transfer program should meet with a transfer advisor at the Transfer Resource Center.

## General Requirements

Students must complete a minimum of 60 semester hours of transfer courses including the required general education courses. **A minimum of 21 semester credit hours must be earned at Central Piedmont.**

## General Education Goals

See Central Piedmont General Education Goals (p. 96) for College-Level Programs for Core Competencies and approved general education courses for an Associate in Arts Degree.

## Transfer Articulation Agreement

The Comprehensive Articulation Agreement (CAA) is a statewide contract between the North Carolina Community College System and the North Carolina State University System. This agreement enables students to complete lower division general education requirements at the community college and meet respective four-year college or university equivalents by doing so.

### Important Guidelines from the CAA

The CAA assures admission to one of the 16 UNC institutions with the following stipulations:

- Admission is not assured to a specific campus or specific program or major.
- Students must meet all requirements of the CAA.
- Students must have an overall grade point average (GPA) of at least 2.0 on a 4.0 scale, as calculated by the college from which they graduated, and a grade of "C" or better in all CAA courses.
- Students must be academically eligible for re-admission to the last institution attended.
- Students must meet judicial requirements of the institution to which they apply.
- Students must meet all application requirements at the receiving institution including the submission of all required documentation by stated deadlines.

The AA and AS degree programs of study are structured to include two components:

1. **Universal General Education Transfer Component** comprises a minimum of 30 semester hours of credit, and

- North Carolina Wesleyan College
- Peace College
- Pfeiffer University
- Queens University of Charlotte
- St. Andrews Presbyterian College
- Saint Augustine's College
- Shaw University
- Warren Wilson College
- Wingate University

## College Transfer Associate in Arts (A.A.) Degree

The Associate in Arts (AA) degree is designed for students who plan to transfer to four-year colleges and universities with majors in the Humanities, Social Sciences, and Business. The degree will transfer as a block to North Carolina public universities and other institutions which participate in the Comprehensive Articulation Agreement (CAA). Electives should be selected based on the intended major. For specific requirements, consult a Transfer Advisor or the catalog of the four-year school to which transfer is intended. Electives must be chosen from transferrable coursework.

## College Transfer Associate in Arts Degree A.A. (A10100)

\*\*\*Note: Prior to registering for ASL 112, ASL 211, or ASL 212, students who have taken an ASL course at another college or university and/or who have had two or more consecutive semesters lapse since taking ASL must take a departmental ASL placement test to ensure proper placement.

### Program Requirements

#### English Composition

ENG 111	Writing and Inquiry	3.0
ENG 112	Writing and Research in the Disciplines	3.0

#### Humanities/Fine Arts Core

COM 231	Public Speaking	3.0
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Literature Requirement:

Take 1 course:		3.0
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ENG 231	American Literature I	
ENG 232	American Literature II	
ENG 241	British Literature I	
ENG 242	British Literature II	

Take 3.0 credits from the following courses:		3.0
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ART 111	Art Appreciation	
ART 114	Art History Survey I	
ART 115	Art History Survey II	
MUS 110	Music Appreciation	
MUS 112	Introduction to Jazz	
PHI 215	Philosophical Issues	
PHI 240	Introduction to Ethics	

#### Humanities/Fine Arts Elective

Take 3 credits:		3.0
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ART 111	Art Appreciation	
ART 114	Art History Survey I	

ART 115	Art History Survey II	
ASL 111	Elementary ASL I	
COM 110	Introduction to Communication	
COM 120	Intro to Interpersonal Communication	
DAN 110	Dance Appreciation	
DRA 111	Theatre Appreciation	
ENG 231	American Literature I	
ENG 232	American Literature II	
ENG 241	British Literature I	
ENG 242	British Literature II	
ENG 251	Western World Literature I	
ENG 252	Western World Literature II	
FRE 111	Elementary French I	
FRE 112	Elementary French II	
FRE 211	Intermediate French I	
FRE 212	Intermediate French II	
GER 111	Elementary German I	
GER 112	Elementary German II	
GER 211	Intermediate German I	
GER 212	Intermediate German II	
HUM 130	Myth in Human Culture	
HUM 211	Humanities I	
HUM 212	Humanities II	
MUS 110	Music Appreciation	
MUS 112	Introduction to Jazz	
PHI 215	Philosophical Issues	
PHI 220	Western Philosophy I	
PHI 240	Introduction to Ethics	
REL 110	World Religions	
REL 111	Eastern Religions	
REL 211	Introduction to Old Testament	
REL 212	Introduction to New Testament	
SPA 111	Elementary Spanish I	
SPA 112	Elementary Spanish II	
SPA 211	Intermediate Spanish I	
SPA 212	Intermediate Spanish II	

#### Behavioral/Social Science Core

History Requirement:

Take 3 credits:		3.0
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HIS 111	World Civilizations I	
HIS 112	World Civilizations II	
HIS 131	American History I	
HIS 132	American History II	

Take 6.0 credits from the following courses:		6.0
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ECO 251	Principles of Microeconomics	
ECO 252	Principles of Macroeconomics	
POL 120	American Government	
PSY 150	General Psychology	
SOC 210	Introduction to Sociology	

#### Behavioral/Social Science Elective

Take 3 credits:		3.0
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ANT 210	General Anthropology	
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ECO 251	Principles of Microeconomics
ECO 252	Principles of Macroeconomics
GEO 111	World Regional Geography
HIS 111	World Civilizations I
HIS 112	World Civilizations II
HIS 131	American History I
HIS 132	American History II
POL 120	American Government
PSY 150	General Psychology
SOC 210	Introduction to Sociology

**Math Core**

Take 3 credits: 3.0

MAT 143	Quantitative Literacy
MAT 152	Statistical Methods I
MAT 171	Precalculus Algebra

**Natural Sciences Core:**

Take 4 credits: 4.0

AST 111	Descriptive Astronomy
AST 111A	Descriptive Astronomy Lab
AST 151	General Astronomy I
AST 151A	General Astronomy I Lab
BIO 110	Principles of Biology
BIO 111	General Biology I
CHM 151	General Chemistry I
GEL 111	Geology
PHY 110	Conceptual Physics
PHY 110A	Conceptual Physics Lab

**General Education Electives**

Take 8 credits from the following: 8.0

ART 111	Art Appreciation
ART 114	Art History Survey I
ART 115	Art History Survey II
ASL 111	Elementary ASL I
ASL 112	Elementary ASL II
ASL 211	Intermediate ASL I
ASL 212	Intermediate ASL II
COM 110	Introduction to Communication
COM 120	Intro to Interpersonal Communication
DAN 110	Dance Appreciation
DRA 111	Theatre Appreciation
ENG 231	American Literature I
ENG 232	American Literature II
ENG 241	British Literature I
ENG 242	British Literature II
ENG 251	Western World Literature I
ENG 252	Western World Literature II
FRE 111	Elementary French I
FRE 112	Elementary French II
FRE 211	Intermediate French I
FRE 212	Intermediate French II
GER 111	Elementary German I
GER 112	Elementary German II

GER 211	Intermediate German I
GER 212	Intermediate German II
HUM 130	Myth in Human Culture
HUM 211	Humanities I
HUM 212	Humanities II
MUS 110	Music Appreciation
MUS 112	Introduction to Jazz
PHI 215	Philosophical Issues
PHI 220	Western Philosophy I
PHI 240	Introduction to Ethics
REL 110	World Religions
REL 111	Eastern Religions
REL 211	Introduction to Old Testament
REL 212	Introduction to New Testament
SPA 111	Elementary Spanish I
SPA 112	Elementary Spanish II
SPA 211	Intermediate Spanish I
SPA 212	Intermediate Spanish II
ANT 210	General Anthropology
ECO 251	Principles of Microeconomics
ECO 252	Principles of Macroeconomics
HIS 111	World Civilizations I
HIS 112	World Civilizations II
HIS 131	American History I
HIS 132	American History II
POL 120	American Government
PSY 150	General Psychology
SOC 210	Introduction to Sociology
MAT 143	Quantitative Literacy
MAT 152	Statistical Methods I
MAT 171	Precalculus Algebra
MAT 172	Precalculus Trigonometry
MAT 263	Brief Calculus
MAT 271	Calculus I
MAT 272	Calculus II
MAT 273	Calculus III
AST 111	Descriptive Astronomy
AST 111A	Descriptive Astronomy Lab
AST 151	General Astronomy I
AST 151A	General Astronomy I Lab
BIO 110	Principles of Biology
BIO 111	General Biology I
BIO 112	General Biology II
CHM 151	General Chemistry I
CHM 152	General Chemistry II
GEL 111	Geology
PHY 110	Conceptual Physics
PHY 110A	Conceptual Physics Lab

**Other Required Hours:**

ACA 122 College Transfer Success 1.0

**College Transfer Electives:**

Take 14 Credits: 14.0



Programs of Study

ACC 120	Principles of Financial Accounting	ASL 281	ASL Lab 3
ACC 121	Principles of Managerial Accounting	ASL 282	ASL Lab 4
ANT 210	General Anthropology	AST 111	Descriptive Astronomy
ANT 220	Cultural Anthropology	AST 111A	Descriptive Astronomy Lab
ANT 221	Comparative Cultures	AST 151	General Astronomy I
ART 111	Art Appreciation	AST 151A	General Astronomy I Lab
ART 113	Art Methods and Materials	BIO 110	Principles of Biology
ART 114	Art History Survey I	BIO 111	General Biology I
ART 115	Art History Survey II	BIO 112	General Biology II
ART 116	Survey of American Art	BIO 120	Introductory Botany
ART 117	Non-Western Art History	BIO 130	Introductory Zoology
ART 121	Two-Dimensional Design	BIO 150	Genetics in Human Affairs
ART 122	Three-Dimensional Design	BIO 155	Nutrition
ART 131	Drawing I	BIO 163	Basic Anatomy & Physiology
ART 132	Drawing II	BIO 168	Anatomy and Physiology I
ART 135	Figure Drawing I	BIO 169	Anatomy and Physiology II
ART 171	Computer Art I	BIO 175	General Microbiology
ART 212	Gallery Assistantship I	BIO 275	Microbiology
ART 213	Gallery Assistantship II	BUS 110	Introduction to Business
ART 231	Printmaking I	BUS 115	Business Law I
ART 232	Printmaking II	BUS 137	Principles of Management
ART 235	Figure Drawing II	BUS 228	Business Statistics
ART 240	Painting I	CHM 115	Concepts in Chemistry
ART 241	Painting II	CHM 115A	Concepts in Chemistry Lab
ART 242	Landscape Painting	CHM 130	General, Organic, & Biochemistry
ART 243	Portrait Painting	CHM 130A	General, Organic, & Biochemistry Lab
ART 244	Watercolor	CHM 131	Introduction to Chemistry
ART 245	Metals I	CHM 131A	Introduction to Chemistry Lab
ART 246	Metals II	CHM 132	Organic and Biochemistry
ART 247	Jewelry I	CHM 151	General Chemistry I
ART 248	Jewelry II	CHM 152	General Chemistry II
ART 260	Photography Appreciation	CHM 251	Organic Chemistry I
ART 261	Photography I	CHM 252	Organic Chemistry II
ART 262	Photography II	CIS 110	Introduction to Computers
ART 264	Digital Photography I	CIS 115	Introduction to Programming and Logic
ART 265	Digital Photography II	CJC 111	Introduction to Criminal Justice
ART 266	Videography I	CJC 121	Law Enforcement Operations
ART 267	Videography II	CJC 141	Corrections
ART 271	Computer Art II	COM 110	Introduction to Communication
ART 281	Sculpture I	COM 111	Voice and Diction I
ART 282	Sculpture II	COM 120	Intro to Interpersonal Communication
ART 283	Ceramics I	COM 130	Nonverbal Communication
ART 284	Ceramics II	COM 140	Introduction to Intercultural Communication
ART 285	Ceramics III	COM 150	Introduction to Mass Communication
ART 286	Ceramics IV	CSC 120	Computing Fundamentals I
ART 288	Studio	CSC 130	Computing Fundamentals II
ASL 111	Elementary ASL I	CSC 134	C++ Programming
ASL 112	Elementary ASL II	CSC 151	JAVA Programming
ASL 181	ASL Lab 1	DAN 110	Dance Appreciation
ASL 182	ASL Lab 2	DAN 124	Jazz Dance I
ASL 211	Intermediate ASL I	DAN 125	Jazz Dance II
ASL 212	Intermediate ASL II	DAN 130	Ballet I

DAN 131	Ballet II	ENG 275	Science Fiction
DAN 132	Intermediate Ballet I	FRE 111	Elementary French I
DAN 133	Intermediate Ballet II	FRE 112	Elementary French II
DAN 140	Modern Dance I	FRE 161	Cultural Immersion
DAN 141	Modern Dance II	FRE 181	French Lab 1
DAN 142	Intermediate Modern Dance I	FRE 182	French Lab 2
DAN 143	Intermediate Modern Dance II	FRE 211	Intermediate French I
DAN 221	Advanced Modern Dance I	FRE 212	Intermediate French II
DAN 222	Advanced Modern Dance II	FRE 281	French Lab 3
DAN 225	Choreography I	FRE 282	French Lab 4
DAN 226	Choreography II	GEL 111	Geology
DAN 236	Advanced Ballet I	GEL 113	Historical Geology
DAN 237	Advanced Ballet II	GEL 120	Physical Geology
DAN 262	Dance Performance	GEL 230	Environmental Geology
DAN 264	Dance Production	GEO 110	Introduction to Geography
DFT 170	Engineering Graphics	GEO 111	World Regional Geography
DRA 111	Theatre Appreciation	GEO 131	Physical Geography I
DRA 120	Voice for Performance	GER 111	Elementary German I
DRA 124	Readers Theatre	GER 112	Elementary German II
DRA 128	Children's Theatre	GER 161	Cultural Immersion
DRA 130	Acting I	GER 181	German Lab 1
DRA 131	Acting II	GER 182	German Lab 2
DRA 135	Acting for the Camera I	GER 211	Intermediate German I
DRA 136	Acting for the Camera II	GER 212	Intermediate German II
DRA 140	Stagecraft I	GER 281	German Lab 3
DRA 141	Stagecraft II	GER 282	German Lab 4
DRA 142	Costuming	HEA 110	Personal Health/Wellness
DRA 145	Stage Make-Up	HEA 112	First Aid & CPR
DRA 170	Play Production I	HIS 111	World Civilizations I
DRA 171	Play Production II	HIS 112	World Civilizations II
DRA 240	Lighting for the Theatre	HIS 131	American History I
DRA 260	Directing	HIS 132	American History II
DRA 270	Play Production III	HIS 141	Genealogy & Local History
ECO 151	Survey of Economics	HIS 162	Women and History
ECO 251	Principles of Microeconomics	HIS 165	Twentieth-Century World
ECO 252	Principles of Macroeconomics	HIS 221	African-American History
EGR 150	Intro to Engineering	HIS 222	African-American History I
EGR 220	Engineering Statics	HIS 223	African-American History II
ENG 113	Literature-Based Research	HIS 226	The Civil War
ENG 114	Professional Research & Reporting	HIS 227	Native American History
ENG 125	Creative Writing I	HIS 228	History of the South
ENG 126	Creative Writing II	HIS 229	History of the Old South
ENG 231	American Literature I	HIS 230	The Changing South
ENG 232	American Literature II	HIS 231	Recent American History
ENG 241	British Literature I	HIS 233	History of Appalachia
ENG 242	British Literature II	HIS 234	Cherokee History
ENG 251	Western World Literature I	HIS 236	North Carolina History
ENG 252	Western World Literature II	HIS 260	History of Africa
ENG 253	The Bible As Literature	HIS 261	East Asian History
ENG 272	Southern Literature	HIS 262	Middle East History
ENG 273	African-American Literature	HIS 271	The French Revolution Era
ENG 274	Literature by Women	HUM 115	Critical Thinking

Programs of Study

HUM 120	Cultural Studies	MUS 271	Music History I
HUM 130	Myth in Human Culture	MUS 272	Music History II
HUM 160	Introduction to Film	MUS 273	Opera Production III
HUM 211	Humanities I	MUS 274	Opera Production IV
HUM 212	Humanities II	PED 110	Fit and Well for Life
JOU 110	Introduction to Journalism	PED 111	Physical Fitness I
JOU 216	Writing for Mass Media	PED 113	Aerobics I
JOU 217	Feature/Editorial Writing	PED 117	Weight Training I
MAT 143	Quantitative Literacy	PED 121	Walk, Jog, Run
MAT 152	Statistical Methods I	PED 122	Yoga I
MAT 171	Precalculus Algebra	PED 128	Golf-Beginning
MAT 172	Precalculus Trigonometry	PED 152	Swimming-Beginning
MAT 263	Brief Calculus	PED 163	Kayaking-Basic
MAT 271	Calculus I	PED 169	Orienteering
MAT 272	Calculus II	PED 170	Backpacking
MAT 273	Calculus III	PED 173	Rock Climbing
MAT 280	Linear Algebra	PHI 215	Philosophical Issues
MAT 285	Differential Equations	PHI 220	Western Philosophy I
MUS 110	Music Appreciation	PHI 230	Introduction to Logic
MUS 111	Fundamentals of Music	PHI 240	Introduction to Ethics
MUS 112	Introduction to Jazz	PHS 110	Survey of Physical Science
MUS 121	Music Theory I	PHY 110	Conceptual Physics
MUS 122	Music Theory II	PHY 110A	Conceptual Physics Lab
MUS 123	Music Composition	PHY 151	College Physics I
MUS 131	Chorus I	PHY 152	College Physics II
MUS 132	Chorus II	PHY 251	General Physics I
MUS 135	Jazz Ensemble I	PHY 252	General Physics II
MUS 136	Jazz Ensemble II	POL 110	Introduction to Political Science
MUS 141	Ensemble I	POL 120	American Government
MUS 142	Ensemble II	POL 210	Comparative Government
MUS 151	Class Music I	POL 220	International Relations
MUS 152	Class Music II	PSY 150	General Psychology
MUS 161	Applied Music I	PSY 211	Psych
MUS 162	Applied Music II	PSY 231	Forensic Psychology
MUS 173	Opera Production I	PSY 237	Social Psychology
MUS 174	Opera Production II	PSY 241	Developmental Psychology
MUS 210	History of Rock Music	PSY 281	Abnormal Psychology
MUS 213	Opera and Musical Theatre	REL 110	World Religions
MUS 221	Music Theory III	REL 111	Eastern Religions
MUS 222	Music Theory IV	REL 211	Introduction to Old Testament
MUS 231	Chorus III	REL 212	Introduction to New Testament
MUS 232	Chorus IV	SOC 210	Introduction to Sociology
MUS 235	Jazz Ensemble III	SOC 213	Sociology of the Family
MUS 236	Jazz Ensemble IV	SOC 220	Social Problems
MUS 241	Ensemble III	SOC 225	Social Diversity
MUS 242	Ensemble IV	SOC 234	Sociology of Gender
MUS 251	Class Music III	SPA 111	Elementary Spanish I
MUS 252	Class Music IV	SPA 112	Elementary Spanish II
MUS 253	Big Band	SPA 161	Cultural Immersion
MUS 261	Applied Music III	SPA 181	Spanish Lab 1
MUS 262	Applied Music IV	SPA 182	Spanish Lab 2
MUS 265	Piano Pedagogy	SPA 211	Intermediate Spanish I

SPA 212	Intermediate Spanish II
SPA 221	Spanish Conversation
SPA 281	Spanish Lab 3
SPA 282	Spanish Lab 4
EFL 111	English for Internationals I
EFL 181	EFL Lab 1
EFL 112	English for Internationals II
EFL 182	EFL Lab 2
WBL 111	Work-Based Learning I
ACA 111 OR ACA 120 may be used as an optional 61st credit in this program. They may not count toward the 60 credit total.	
Total Credits	60

\*\*\*Note: Prior to registering for ASL 112, ASL 211, or ASL 212, students who have taken an ASL course at another college or university and/or who have had two or more consecutive semesters lapse since taking ASL must take a departmental ASL placement test to ensure proper placement.

## College Transfer Associate in Engineering (A. E.) Degree

The Associate in Engineering (AE) degree is designed for students who plan to transfer to 4-year colleges and universities to major in Engineering. The degree transfers as a block to North Carolina public universities and other institutions which participate in the Comprehensive Articulation Agreement (CAA). Electives should be selected based on the intended major. For specific requirements, consult with an academic advisor in the Central Piedmont Engineering Technologies Division, a Central Piedmont Transfer Advisor, or the catalog for the senior four-year school to which transfer is intended. Students are encouraged to take the Accuplacer College Level Mathematics Test to be able to start with Calculus I in the first semester of study.

For the most current information on the Associate in Engineering degree, see Academic Programs on the Engineering Technologies website.

### College Transfer Associate in Engineering Degree (A10500)

For the most current information on the Associate in Engineering degree, see Academic Programs on the Engineering Technologies website.

### Program Requirements

#### General Education Requirements

ENG 111	Writing and Inquiry	3.0
ENG 112	Writing and Research in the Disciplines	3.0
COM 231	Public Speaking	3.0
ENG 231	American Literature I	3.0
or ENG 232	American Literature II	
ECO 251	Principles of Microeconomics	3.0
or ECO 252	Principles of Macroeconomics	
Select one of the following:		3.0
HIS 111	World Civilizations I	
HIS 112	World Civilizations II	
HIS 131	American History I	
HIS 132	American History II	
POL 120	American Government	

PSY 150	General Psychology	
SOC 210	Introduction to Sociology	
MAT 271	Calculus I	4.0
MAT 272	Calculus II	4.0
MAT 273	Calculus III	4.0
CHM 151	General Chemistry I	4.0
PHY 251	General Physics I	4.0
PHY 252	General Physics II	4.0
<b>Other Requirements:</b>		
ACA 122	College Transfer Success	1.0
EGR 150	Intro to Engineering	2.0
MAT 280	Linear Algebra	3.0
MAT 285	Differential Equations	3.0
Select 9 credits from the following:		9.0
BIO 111	General Biology I	
CHM 152	General Chemistry II	
CSC 134	C++ Programming	
DFT 170	Engineering Graphics	
EGR 212	Logic System Design I	
EGR 220	Engineering Statics	
Total Credits		60

## College Transfer Associate in Fine Arts (A.F.A.) Degree

The Associate in Fine Arts Degree is designed for students who plan to transfer to a four-year college or university to major in art, theatre, or music. **However, the AFA degree is not included in the Comprehensive Articulation Agreement, so transfer credit at the four-year institution is awarded on a course-by-course basis along with the presentation of an art portfolio or an audition for dance or music.**

Students who want to concentrate in dance should select the Associate in Arts degree program.

Students who want to focus on the areas of music, theatre, or visual art should select the appropriate degree below:

- Associate in Fine Arts in Visual Arts (A10600) (p. 106)
- Associate in Fine Arts in Music (A10700) (p. 104)
- Associate in Fine Arts in Theatre (A10800) (p. 105)

### Associate in Fine Arts Degree

The Associate in Fine Arts (A.F.A.) degree is awarded for study leading toward a career in visual arts, theatre, or music. Students should select the appropriate degree from the list below:

- Associate in Fine Arts in Visual Arts (A10600) (p. 105)
- Associate in Fine Arts in Music (A10700) (p. 105)
- Associate in Fine Arts in Theatre (A10800) (p. 105)

**No diplomas are awarded for college transfer.**

**No certificates are awarded for college transfer.**



## Associate in Fine Arts in Music (A.F.A.)

The Associate in Fine Arts Degree in music is designed for students who plan to transfer to a four-year college or university to major in music. **However, the AFA degree is not included in the Comprehensive Articulation Agreement, so transfer credit at the four-year institution is awarded on a course-by-course basis along with the presentation of an audition, proficiency tests, or entrance exams for music.** The AFA requires 26 semester hours of general education core courses and 36 semester hours of courses in music. Transfer students should contact the senior (four-year) institution for specific transfer requirements.

### Associate in Fine Arts Degree (A10700)

The Associate in Fine Arts degree in music is awarded for study leading toward a career in music. The A.F.A. degree is not included in the Comprehensive Articulation Agreement. It requires 28 semester hours of General Education, with the remaining 38 hours devoted to skill development in the chosen area of concentration. Transfer to a senior institution is on a course-by-course basis along with the presentation of an audition, proficiency tests, or entrance exams for music. Students planning to transfer should contact the institution they plan to attend for specific transfer requirements.

### Associate in Fine Arts in Music (A10700)

#### General Education Requirements

ENG 111	Writing and Inquiry	3.0
ENG 112	Writing and Research in the Disciplines	3.0
COM 231	Public Speaking	3.0
Select one of the following courses:		3.0
ART 111	Art Appreciation	
ART 114	Art History Survey I	
ART 115	Art History Survey II	
MUS 110	Music Appreciation	
MUS 112	Introduction to Jazz	
PHI 215	Philosophical Issues	
PHI 240	Introduction to Ethics	
Select one of the following courses:		3.0
HIS 111	World Civilizations I	
HIS 112	World Civilizations II	
HIS 131	American History I	
HIS 132	American History II	
Select one course from the following:		3.0
ECO 251	Principles of Microeconomics	
ECO 252	Principles of Macroeconomics	
POL 120	American Government	
PSY 150	General Psychology	
SOC 210	Introduction to Sociology	
Select one of the following courses:		3.0
MAT 143	Quantitative Literacy	
MAT 171	Precalculus Algebra	
Select 4.0 credits from the following courses:		4.0
AST 111 &	Descriptive Astronomy and Descriptive Astronomy Lab	

AST 151 &	General Astronomy I and General Astronomy I Lab	
BIO 110	Principles of Biology	
BIO 111	General Biology I	
CHM 151	General Chemistry I	
GEL 111	Geology	
PHY 110 &	Conceptual Physics and Conceptual Physics Lab	
ACA 122	College Transfer Success	1.0
<b>Music Theory:</b>		
MUS 121	Music Theory I	3.0
MUS 125	Aural Skills I	1.0
MUS 122	Music Theory II	3.0
MUS 126	Aural Skills II	1.0
MUS 221	Music Theory III	3.0
MUS 225	Aural Skills III	1.0
MUS 222	Music Theory IV	3.0
MUS 226	Aural Skills IV	1.0
<b>Class Music:</b>		
MUS 151P	Class Music I (Piano I)	1.0
MUS 152P	Class Music II (Piano II)	1.0
MUS 251P	Class Music III (piano Iii)	1.0
MUS 252P	Class Music IV (piano Iv)	1.0
<b>Applied Music:</b>		
MUS 161	Applied Music I	2.0
MUS 162	Applied Music II	2.0
MUS 261	Applied Music III	2.0
MUS 262	Applied Music IV	2.0
<b>Music Ensembles:</b>		
Select 4.0 credits from the following courses:		4.0
MUS 131	Chorus I	
MUS 132	Chorus II	
MUS 133	Band I	
MUS 134	Band II	
MUS 135	Jazz Ensemble I	
MUS 136	Jazz Ensemble II	
MUS 137	Orchestra I	
MUS 138	Orchestra II	
MUS 141	Ensemble I	
MUS 142	Ensemble II	
MUS 173	Opera Production I	
MUS 151T	Class Music I	
MUS 174	Opera Production II	
MUS 231	Chorus III	
MUS 232	Chorus IV	
MUS 233	Band III	
MUS 234	Band IV	
MUS 235	Jazz Ensemble III	
MUS 236	Jazz Ensemble IV	
MUS 237	Orchestra III	
MUS 238	Orchestra IV	
MUS 241	Ensemble III	

MUS 242	Ensemble IV	
MUS 253	Big Band	
MUS 273	Opera Production III	
MUS 274	Opera Production IV	
<b>Music History</b>		
Select 3.0 credits from the following courses:		3.0
MUS 271	Music History I	
MUS 272	Music History II (In order to comply with bilateral agreements with four-year institutions, the Music Department strongly suggests that students complete both levels of Music History (MUS 271 and MUS 272). Please see your advisor for additional information.)	
WBL 111	Work-Based Learning I	
MUS 111	Fundamentals of Music	
MUS 151T	Class Music I	
Total Credits		61

## Associate in Fine Arts in Theatre (A.F.A.)

The Associate in Fine Arts in Theatre is designed for students who plan to transfer to a four-year college or university to major in Theatre. However, the **AFA degree is not included in the Comprehensive Articulation Agreement, so transfer credit at the four-year institution is awarded on a course-by-course basis** along with the presentation of a portfolio. The AFA in Theatre has two tracks allowing students to specialize in either Performance or Technical Theatre. The AFA requires 30 hours of general education core courses and 30 semester hours of courses in Theatre. Transfer students should contact the senior (four-year) institution for specific transfer requirements.

### Associate in Fine Arts in Theatre (A10800)

#### General Education Requirements

ENG 111	Writing and Inquiry	3.0
ENG 112	Writing and Research in the Disciplines	3.0
COM 231	Public Speaking	3.0
Select one of the following courses:		3.0
ENG 231	American Literature I	
ENG 232	American Literature II	
ENG 241	British Literature I	
ENG 242	British Literature II	
Select one of the following courses:		3.0
ART 111	Art Appreciation	
ART 114	Art History Survey I	
ART 115	Art History Survey II	
ENG 231	American Literature I	
ENG 232	American Literature II	
ENG 241	British Literature I	
ENG 242	British Literature II	
MUS 110	Music Appreciation	
MUS 112	Introduction to Jazz	
PHI 215	Philosophical Issues	
PHI 240	Introduction to Ethics	

Select one of the following courses:		3.0
HIS 111	World Civilizations I	
HIS 112	World Civilizations II	
HIS 131	American History I	
HIS 132	American History II	
Select two of the following courses:		6.0
ECO 251	Principles of Microeconomics	
ECO 252	Principles of Macroeconomics	
POL 120	American Government	
PSY 150	General Psychology	
SOC 210	Introduction to Sociology	
Select one of the following courses:		3.0
MAT 143	Quantitative Literacy	
MAT 152	Statistical Methods I	
MAT 171	Precalculus Algebra	

Select one of the following:		4.0
AST 111 &	Descriptive Astronomy and Descriptive Astronomy Lab	
AST 151 &	General Astronomy I and General Astronomy I Lab	
BIO 110	Principles of Biology	
BIO 111	General Biology I	
CHM 151	General Chemistry I	
GEL 111	Geology	
PHY 110 &	Conceptual Physics and Conceptual Physics Lab	

#### Major Requirements

ACA 122	College Transfer Success	1.0
DRA 211	Theatre History I	3.0
DRA 212	Theatre History II	3.0
Acting/Technical Track:		22.0
Total Credits		60

#### Acting Track:

DRA 120	Voice for Performance	3.0
DRA 130	Acting I	3.0
DRA 135	Acting for the Camera I	3.0
DRA 140	Stagecraft I	3.0
DRA 142	Costuming	3.0
DRA 170	Play Production I	3.0
DRA 171	Play Production II	3.0
Select one of the following courses:		1.0
DRA 131	Acting II	
DRA 132	Stage Movement	
DRA 136	Acting for the Camera II	
DRA 111	Theatre Appreciation	
DRA 145	Stage Make-Up	
DRA 112	Literature of the Theatre	
DRA 270	Play Production III	
WBL 111	Work-Based Learning I	

Total Credits		22
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**Technical Track:**

DRA 120	Voice for Performance	3.0
DRA 130	Acting I	3.0
DRA 135	Acting for the Camera I	3.0
DRA 140	Stagecraft I	3.0
DRA 141	Stagecraft II	3.0
DRA 142	Costuming	3.0
DRA 170	Play Production I	3.0
Select one of the following courses:		1.0
DRA 111	Theatre Appreciation	
DRA 112	Literature of the Theatre	
DRA 145	Stage Make-Up	
DRA 171	Play Production II	
WBL 111	Work-Based Learning I	
Total Credits		22

## Associate in Fine Arts in Visual Arts (A.F.A.)

The Associate in Fine Arts Degree in Visual Arts is designed for students who plan to transfer to a four-year college or university to major in visual arts. **However, the AFA degree is not included in the Comprehensive Articulation Agreement, so transfer credit at the four-year institution is awarded on a course-by-course basis along with the presentation of a portfolio.** The AFA requires 28 semester hours of general education core courses and 32 semester hours of courses in ART. Transfer students should contact the senior (four-year) institution for specific transfer requirements.

### Associate in Fine Arts in Visual Arts (A10600)

The Associate in Fine Arts degree in Visual Arts is awarded for study leading toward a career in visual arts. The A.F.A. degree is not included in the Comprehensive Articulation Agreement. It requires 28 semester hours of General Education, with the remaining 32 hours devoted to skill development in the chosen area of concentration. Transfer to a senior institution will be on a course-by-course basis along with the presentation of a portfolio. Students planning to transfer should contact the institution they plan to attend for specific transfer requirements.

**General Education Requirements**

ENG 111	Writing and Inquiry	3.0
ENG 112	Writing and Research in the Disciplines	3.0
COM 231	Public Speaking	3.0
Select one of the following courses:		3.0
ENG 231	American Literature I	
ENG 232	American Literature II	
ENG 241	British Literature I	
ENG 242	British Literature II	
Select one of the following courses:		3.0
HIS 111	World Civilizations I	
HIS 112	World Civilizations II	
HIS 131	American History I	
HIS 132	American History II	
Select one of the following courses:		3.0
ECO 251	Principles of Microeconomics	

ECO 252	Principles of Macroeconomics	
POL 120	American Government	
PSY 150	General Psychology	
SOC 210	Introduction to Sociology	
Select one of the following courses:		3.0
MAT 143	Quantitative Literacy	
MAT 152	Statistical Methods I	
MAT 171	Precalculus Algebra	
Select one of the following:		4.0
AST 111	Descriptive Astronomy and Descriptive Astronomy Lab	
AST 151	General Astronomy I and General Astronomy I Lab	
BIO 110	Principles of Biology	
BIO 111	General Biology I	
CHM 151	General Chemistry I	
GEL 111	Geology	
PHY 110	Conceptual Physics and Conceptual Physics Lab	

**Major Requirements**

ACA 122	College Transfer Success	1.0
ART 114	Art History Survey I	3.0
ART 115	Art History Survey II	3.0
ART 121	Two-Dimensional Design	3.0
ART 122	Three-Dimensional Design	3.0
ART 131	Drawing I	3.0
Select 19.0 credits from the following courses:		19.0
Level One Studio Courses:		
ART 135	Figure Drawing I	
ART 171	Computer Art I	
ART 231	Printmaking I	
ART 240	Painting I	
ART 260	Photography Appreciation	
ART 261	Photography I	
ART 264	Digital Photography I	
ART 266	Videography I	
ART 281	Sculpture I	
ART 283	Ceramics I	
Level Two Studio Courses:		
ART 132	Drawing II	
ART 214	Portfolio and Resume	
ART 232	Printmaking II	
ART 235	Figure Drawing II	
ART 241	Painting II	
ART 242	Landscape Painting	
ART 243	Portrait Painting	
ART 244	Watercolor	
ART 247	Jewelry I	
ART 248	Jewelry II	
ART 262	Photography II	
ART 265	Digital Photography II	
ART 282	Sculpture II	
ART 284	Ceramics II	

ART 285	Ceramics III
ART 286	Ceramics IV
ART 288	Studio
Non-Studio Electives:	
ART 116	Survey of American Art
ART 117	Non-Western Art History
ART 212	Gallery Assistantship I
Foreign Language Options:	
FRE 111 & FRE 181	Elementary French I and French Lab 1
FRE 112 & FRE 182	Elementary French II and French Lab 2
GER 111 & GER 181	Elementary German I and German Lab 1
GER 112 & GER 182	Elementary German II and German Lab 2
SPA 111 & SPA 181	Elementary Spanish I and Spanish Lab 1
SPA 112 & SPA 182	Elementary Spanish II and Spanish Lab 2
Total Credits	60

## College Transfer Associate in Science (A.S.) Degree

The Associate in Science (AS) degree is designed for students who plan to transfer to 4-year colleges and universities with in majors Biology, Chemistry, Physics, Medicine, and Engineering. The degree transfers as a block to North Carolina public universities and other institutions which participate in the Comprehensive Articulation Agreement (CAA). Electives should be selected based on the intended major. For specific requirements, consult a Transfer Advisor or the catalog of the four-year school to which transfer is intended. Electives must be chosen from transferrable coursework.

### College Transfer Associate in Science Degree

- Associate in Science - Biological Sciences Pathway (A10400B) (p. 107)
- Associate in Science - Computer Science and Mathematics Pathway (A10400C) (p. 108)
- Associate in Science - Physical Science Pathway (A10400P) (p. 110)

### Associate in Science - Biological Sciences Pathway (A10400B)

#### English Composition

Take six credit hours of the following:	6.0
ENG 111	Writing and Inquiry
ENG 112	Writing and Research in the Disciplines

#### Humanities/Fine Arts

Take three credit hours of the following:	3.0
COM 231	Public Speaking
Take three credit hours of the following:	3.0

ENG 231	American Literature I
ENG 232	American Literature II
ENG 241	British Literature I
ENG 242	British Literature II
ART 111	Art Appreciation
ART 114	Art History Survey I
ART 115	Art History Survey II
MUS 110	Music Appreciation
MUS 112	Introduction to Jazz
PHI 215	Philosophical Issues
PHI 240	Introduction to Ethics

#### Social/Behavioral Sciences Core

Take three credit hours of the following: 3.0

HIS 111	World Civilizations I
HIS 112	World Civilizations II
HIS 131	American History I
HIS 132	American History II

Take three credit hours of the following: 3.0

ECO 251	Principles of Microeconomics
ECO 252	Principles of Macroeconomics
POL 120	American Government
PSY 150	General Psychology
SOC 210	Introduction to Sociology

#### Behavioral/Social Science Elective:

Take three credit hours of the following: 3.0

ANT 210	General Anthropology
ANT 220	Cultural Anthropology
ANT 221	Comparative Cultures
ECO 151	Survey of Economics
ECO 251	Principles of Microeconomics
ECO 252	Principles of Macroeconomics
GEO 111	World Regional Geography
HIS 111	World Civilizations I
HIS 112	World Civilizations II
HIS 131	American History I
HIS 132	American History II
POL 110	Introduction to Political Science
POL 120	American Government
POL 210	Comparative Government
POL 220	International Relations
PSY 150	General Psychology
PSY 237	Social Psychology
PSY 241	Developmental Psychology
PSY 281	Abnormal Psychology
SOC 210	Introduction to Sociology
SOC 213	Sociology of the Family
SOC 220	Social Problems
SOC 225	Social Diversity (Math Core)

#### Mathematics Core

Take eight credit hours of the following: 8.0

MAT 171	Precalculus Algebra
MAT 172	Precalculus Trigonometry



Programs of Study

MAT 271	Calculus I	
MAT 272	Calculus II	
<b>Natural Sciences Core</b>		
Take eight credit hours of the following BIO courses:		8.0
BIO 111 & BIO 112	General Biology I and General Biology II	
Take eight credit hours of the following CHM courses:		8.0
CHM 151 & CHM 152	General Chemistry I and General Chemistry II	
<b>Other Required Course:</b>		
ACA 122	College Transfer Success	1.0
<b>Humanities/Fine Arts Elective:</b>		
Take three credit hours of the following:		3.0
ART 111	Art Appreciation	
ART 114	Art History Survey I	
ART 115	Art History Survey II	
ART 116	Survey of American Art	
ART 117	Non-Western Art History	
ASL 111	Elementary ASL I	
DAN 110	Dance Appreciation	
DRA 111	Theatre Appreciation	
DRA 112	Literature of the Theatre	
DRA 122	Oral Interpretation	
ENG 231	American Literature I	
ENG 232	American Literature II	
ENG 241	British Literature I	
ENG 242	British Literature II	
ENG 251	Western World Literature I	
ENG 252	Western World Literature II	
FRE 111	Elementary French I	
GER 111	Elementary German I	
HUM 115	Critical Thinking	
HUM 120	Cultural Studies	
HUM 130	Myth in Human Culture	
HUM 211	Humanities I	
HUM 212	Humanities II	
MUS 110	Music Appreciation	
MUS 112	Introduction to Jazz	
PHI 215	Philosophical Issues	
PHI 220	Western Philosophy I	
PHI 240	Introduction to Ethics	
REL 110	World Religions	
REL 111	Eastern Religions	
REL 211	Introduction to Old Testament	
REL 212	Introduction to New Testament	
SPA 111	Elementary Spanish I	
<b>Mathematics/Sciences Electives:</b>		
Take eight credit hours of the following:		8.0
MAT 152	Statistical Methods I	
MAT 263	Brief Calculus	
MAT 271	Calculus I	
MAT 272	Calculus II	

MAT 273	Calculus III	
BIO 168	Anatomy and Physiology I	
BIO 169	Anatomy and Physiology II	
CHM 251	Organic Chemistry I	
CHM 252	Organic Chemistry II	
<b>Behavioral/Social Sciences Elective:</b>		
Take three credit hours of the following:		3.0
ANT 210	General Anthropology	
ANT 220	Cultural Anthropology	
ANT 221	Comparative Cultures	
ECO 151	Survey of Economics	
ECO 251	Principles of Microeconomics	
ECO 252	Principles of Macroeconomics	
GEO 111	World Regional Geography	
HIS 111	World Civilizations I	
HIS 112	World Civilizations II	
HIS 131	American History I	
HIS 132	American History II	
POL 110	Introduction to Political Science	
POL 120	American Government	
POL 210	Comparative Government	
POL 220	International Relations	
PSY 150	General Psychology	
PSY 237	Social Psychology	
PSY 241	Developmental Psychology	
PSY 281	Abnormal Psychology	
SOC 210	Introduction to Sociology	
SOC 213	Sociology of the Family	
SOC 220	Social Problems	
SOC 225	Social Diversity	

Students in this program may opt to complete ACA 111, ACA 120, or WBL 111 as their 61st credit.

Total Credits 60

## Associate in Science - Computer Science and Mathematics Pathway (A10400C)

\*\*\*Note: Prior to registering for ASL 112, ASL 211, or ASL 212, students who have taken an ASL course at another college or university and/or who have had two or more consecutive semesters lapse since taking ASL must take a departmental ASL placement test to ensure proper placement.

### Program Requirements

#### General Education Requirements

<b>English Composition</b>		
Take six credit hours of the following:		6.0
ENG 111	Writing and Inquiry	
ENG 112	Writing and Research in the Disciplines	
<b>Humanities/Fine Arts:</b>		
Take three credit hours of the following:		3.0
ENG 231	American Literature I	
ENG 232	American Literature II	
ENG 241	British Literature I	

ENG 242	British Literature II
ART 111	Art Appreciation
ART 114	Art History Survey I
ART 115	Art History Survey II
MUS 110	Music Appreciation
MUS 112	Introduction to Jazz
PHI 215	Philosophical Issues
PHI 240	Introduction to Ethics

Take three credit hours of the following: 3.0

COM 231	Public Speaking
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Social/Behavioral Sciences:

Take three credit hours of the following: 3.0

HIS 111	World Civilizations I
HIS 112	World Civilizations II
HIS 131	American History I
HIS 132	American History II

Take three credit hours of the following: 3.0

ECO 251	Principles of Microeconomics
ECO 252	Principles of Macroeconomics
POL 120	American Government
PSY 150	General Psychology
SOC 210	Introduction to Sociology

Take three credit hours of the following: 3.0

ANT 210	General Anthropology
ANT 220	Cultural Anthropology
ANT 221	Comparative Cultures
ECO 151	Survey of Economics
ECO 251	Principles of Microeconomics
ECO 252	Principles of Macroeconomics
GEO 111	World Regional Geography
HIS 111	World Civilizations I
HIS 112	World Civilizations II
HIS 131	American History I
HIS 132	American History II
POL 110	Introduction to Political Science
POL 120	American Government
POL 210	Comparative Government
POL 220	International Relations
PSY 150	General Psychology
PSY 237	Social Psychology
PSY 241	Developmental Psychology
PSY 281	Abnormal Psychology
SOC 210	Introduction to Sociology
SOC 213	Sociology of the Family
SOC 220	Social Problems
SOC 225	Social Diversity

Mathematics Core:

Take eight credit hours of the following: 8.0

MAT 171	Precalculus Algebra
MAT 172	Precalculus Trigonometry
MAT 271	Calculus I
MAT 272	Calculus II

Natural Sciences:

Must complete two 2-course lab science sequences. Choose 2 of the 16.0 following groups from two different disciplines:

CHM 151 & CHM 152	General Chemistry I and General Chemistry II
PHY 151 & PHY 152	College Physics I and College Physics II
PHY 251 & PHY 252	General Physics I and General Physics II
BIO 111 & BIO 112	General Biology I and General Biology II

Other Required Hours:

ACA 122	College Transfer Success	1.0
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Humanities/Fine Arts:

Take three credit hours of the following: 3.0

ART 111	Art Appreciation
ART 114	Art History Survey I
ART 115	Art History Survey II
ART 116	Survey of American Art
ART 117	Non-Western Art History
ASL 111	Elementary ASL I
DAN 110	Dance Appreciation
DRA 111	Theatre Appreciation
DRA 112	Literature of the Theatre
DRA 122	Oral Interpretation
ENG 231	American Literature I
ENG 232	American Literature II
ENG 241	British Literature I
ENG 242	British Literature II
ENG 251	Western World Literature I
ENG 252	Western World Literature II
FRE 111	Elementary French I
GER 111	Elementary German I
HUM 120	Cultural Studies
HUM 130	Myth in Human Culture
HUM 211	Humanities I
HUM 212	Humanities II
MUS 110	Music Appreciation
MUS 112	Introduction to Jazz
PHI 215	Philosophical Issues
PHI 220	Western Philosophy I
PHI 240	Introduction to Ethics
REL 110	World Religions
REL 111	Eastern Religions
REL 211	Introduction to Old Testament
REL 212	Introduction to New Testament
SPA 111	Elementary Spanish I

Information Technology/Mathematics:

Take a minimum of eleven credit hours from the following: 11.0

CIS 115	Introduction to Programming and Logic
CSC 120	Computing Fundamentals I
CSC 134	C++ Programming
CSC 151	JAVA Programming

Programs of Study

MAT 152	Statistical Methods I	
MAT 263	Brief Calculus	
MAT 271	Calculus I	
MAT 272	Calculus II	
MAT 273	Calculus III	
MAT 280	Linear Algebra	
MAT 285	Differential Equations	
Students may opt to complete ACA 111, ACA 120, or WBL 111 as the 61st credit of this program.		
Total Credits		60

## Associate in Science - Physical Science Pathway (A10400P)

### General Education Requirements

English Composition		
Take six credit hours of the following:		6.0
ENG 111	Writing and Inquiry	
ENG 112	Writing and Research in the Disciplines	
Communications		
Take three credit hours of the following:		3.0
COM 231	Public Speaking	
Humanities/Fine Arts		
Select three credits from the following:		3.0
ART 111	Art Appreciation	
ART 114	Art History Survey I	
ART 115	Art History Survey II	
ENG 231	American Literature I	
ENG 232	American Literature II	
ENG 241	British Literature I	
ENG 242	British Literature II	
MUS 110	Music Appreciation	
MUS 112	Introduction to Jazz	
PHI 215	Philosophical Issues	
PHI 240	Introduction to Ethics	
Behavioral/Social Sciences		
Take three credit hours of the following:		3.0
HIS 111	World Civilizations I	
HIS 112	World Civilizations II	
HIS 131	American History I	
HIS 132	American History II	
Take three credit hours of the following:		3.0
ECO 251	Principles of Microeconomics	
ECO 252	Principles of Macroeconomics	
POL 120	American Government	
PSY 150	General Psychology	
SOC 210	Introduction to Sociology	
Mathematics Core		
Take eight credit hours of the following:		8.0
MAT 171	Precalculus Algebra	
MAT 172	Precalculus Trigonometry	
MAT 271	Calculus I	
MAT 272	Calculus II	

Sciences Core		
Take eight credit hours of the following:		8.0
PHY 151 & PHY 152	College Physics I and College Physics II	
PHY 251 & PHY 252	General Physics I and General Physics II	
Additional General Education Hours		
Behavioral/Social Sciences		3.0
ANT 210	General Anthropology	
ANT 220	Cultural Anthropology	
ANT 221	Comparative Cultures	
ECO 151	Survey of Economics	
ECO 251	Principles of Microeconomics	
ECO 252	Principles of Macroeconomics	
GEO 111	World Regional Geography	
HIS 111	World Civilizations I	
HIS 112	World Civilizations II	
HIS 131	American History I	
HIS 132	American History II	
POL 110	Introduction to Political Science	
POL 120	American Government	
POL 210	Comparative Government	
POL 220	International Relations	
PSY 150	General Psychology	
PSY 237	Social Psychology	
PSY 241	Developmental Psychology	
PSY 281	Abnormal Psychology	
SOC 210	Introduction to Sociology	
SOC 213	Sociology of the Family	
SOC 220	Social Problems	
SOC 225	Social Diversity	
Physical Sciences		
Take eight credit hours of the following:		8.0
CHM 151 & CHM 152	General Chemistry I and General Chemistry II	
<b>Other Required Hours:</b>		
Take one credit hour of the following:		1.0
ACA 122	College Transfer Success	
Mathematics/Sciences Electives		
Take eight credit hours of the following:		8.0
AST 151	General Astronomy I	
BIO 110	Principles of Biology	
BIO 168	Anatomy and Physiology I	
BIO 168	Anatomy and Physiology I	
BIO 169	Anatomy and Physiology II	
CHM 251	Organic Chemistry I	
CHM 252	Organic Chemistry II	
GEL 111	Geology	
GEL 113	Historical Geology	
MAT 152	Statistical Methods I	
MAT 263	Brief Calculus	
MAT 271	Calculus I	
MAT 272	Calculus II	

MAT 273	Calculus III	
Humanities/Fine Arts Elective		
Take three credit hours of the following:		3.0
ART 111	Art Appreciation	
ART 114	Art History Survey I	
ART 115	Art History Survey II	
ART 116	Survey of American Art	
ART 117	Non-Western Art History	
ASL 111	Elementary ASL I	
DAN 110	Dance Appreciation	
DRA 111	Theatre Appreciation	
DRA 112	Literature of the Theatre	
DRA 122	Oral Interpretation	
DRA 211	Theatre History I	
DRA 212	Theatre History II	
ENG 231	American Literature I	
ENG 232	American Literature II	
ENG 241	British Literature I	
ENG 242	British Literature II	
ENG 251	Western World Literature I	
ENG 252	Western World Literature II	
FRE 111	Elementary French I	
GER 111	Elementary German I	
HUM 115	Critical Thinking	
HUM 120	Cultural Studies	
HUM 130	Myth in Human Culture	
HUM 211	Humanities I	
HUM 212	Humanities II	
MUS 110	Music Appreciation	
MUS 112	Introduction to Jazz	
PHI 215	Philosophical Issues	
PHI 220	Western Philosophy I	
PHI 240	Introduction to Ethics	
REL 110	World Religions	
REL 111	Eastern Religions	
REL 211	Introduction to Old Testament	
REL 212	Introduction to New Testament	
SPA 111	Elementary Spanish I	
Behavioral/Social Sciences Elective		
Take three credit hours of the following:		3.0
ANT 210	General Anthropology	
ANT 220	Cultural Anthropology	
ANT 221	Comparative Cultures	
ECO 151	Survey of Economics	
ECO 251	Principles of Microeconomics	
ECO 252	Principles of Macroeconomics	
GEO 111	World Regional Geography	
HIS 111	World Civilizations I	
HIS 112	World Civilizations II	
HIS 131	American History I	
HIS 132	American History II	
POL 110	Introduction to Political Science	

POL 120	American Government
POL 210	Comparative Government
POL 220	International Relations
PSY 150	General Psychology
PSY 237	Social Psychology
PSY 241	Developmental Psychology
PSY 281	Abnormal Psychology
SOC 210	Introduction to Sociology
SOC 213	Sociology of the Family
SOC 220	Social Problems
SOC 225	Social Diversity

Students in this program may opt to complete ACA 111, ACA 120, or WBL 111 as their 61st credit.

Total Credits 60

## Associate in Applied Science Degrees, Diplomas, Certificates

The programs in the following section are primarily designed for students who intend to enter the workforce upon graduation. Some two-year degree programs also have one-year diplomas, as well as certificates that require less than one year of full-time study. Certain programs are available at all campuses. Others are available only at certain campuses. General education requirements are offered at all Central Piedmont campuses.

### Requirements

These degrees are awarded after completion of a minimum of 64 semester credit hours, or the number of credit hours specified by each area of study, including the required general education courses for that area.

A minimum of 21 credit hours must be earned at Central Piedmont. Official copies of high school and all other college/university transcripts must be on file in the Student Records office.

### Associate in Applied Science Degrees are awarded in the following areas:

- Accounting and Finance (p. 113)
- Advertising and Graphic Design (p. 116)
- Air Conditioning, Heating and Refrigeration Technology (p. 117)
- Architectural Technology (p. 120)
- Automotive Systems Technology (p. 122)
- Baking and Pastry Arts (p. 125)
- Biomedical Equipment Technology (p. 128)
- Broadcasting and Production Technology (p. 129)
- Business Administration (p. 130)
- Cardiovascular Technology (p. 137)
- Civil Engineering Technology (p. 139)
- Collision Repair & Refinishing Technology (p. 140)
- Computer Engineering Technology (p. 142)
- Computer-Integrated Machining Technology (p. 145)
- Construction Management Technology (p. 147)
- Cosmetology (p. 151)
- Criminal Justice Technology (p. 152)
- Culinary Arts (p. 155)



- Dental Hygiene (p. 159)
- Diesel and Heavy Equipment Technology (p. 160)
- Early Childhood Education (p. 162)
- Electrical Engineering Technology (p. 165)
- Electrical Systems Technology (p. 166)
- Electronics Engineering Technology (p. 170)
- Emergency Management (p. 171)(*pending state approval*)
- Emergency Medical Science (p. 172)
- Fire Protection Technology (p. 173)
- Geomatics Technology (p. 175)
- Graphic Arts and Imaging Technology (p. 176)
  - Flexography Concentration (p. 176)
- Health Information Technology (p. 179)
- Horticulture Technology (p. 180)
- Hospitality Management (p. 183)
- Human Services Technology (p. 186)
  - Human Services Technology (p. 186)
  - Developmental Disabilities Concentration (p. 187)
  - Substance Abuse Concentration (p. 188)
- Information Technology (p. 192)
- Interior Design (p. 197)
- Interpreter Education (p. 199)
- Mechanical Engineering Technology (p. 202)
- Mechatronics Engineering Technology (p. 204)
- Medical Assisting (p. 205)
- Medical Laboratory Technology (p. 207)
- Medical Office Administration (p. 208)
- Nondestructive Examination Technology (p. 211)
- Nursing, Associate Degree (p. 214)
- Occupational Therapy Assistant (p. 215)
- Office Administration (p. 217)
- Ophthalmic Medical Personnel (p. 220)
- Paralegal Technology (p. 221)
- Pharmacy Technology (p. 223)
- Physical Therapist Assistant (p. 225)
- Polysomnography (p. 226)
- Respiratory Therapy (p. 228)
- Simulation and Game Development (p. 229)
- Speech Language Pathology Assistant (p. 232)
- Supply Chain Management (p. 233)
- Surgical Technology (p. 234)
- Sustainability Technologies (p. 235)
- Turfgrass Management Technology (p. 237)
- Welding Technology (p. 239)

## Diplomas

Diplomas are awarded after completion of a minimum of 36 semester credit hours, or the number of credit hours specified by the specific program of study. For program completion, a minimum of 12 credit hours must be earned at Central Piedmont. Official copies of high school and all other college/university transcripts must be on file in the Student Records Office.

## Diplomas are awarded in the following areas

- Accounting (p. 113)
- Automotive Systems Technology (p. 122)
- Collision Repair and Refinishing Technology (p. 140)
- Computer-Integrated Machining Technology (p. 145)
- Dental Assisting (p. 158)
- Diesel and Heavy Equipment Technology Diploma (p. 160)
- Hotel Management (p. 183)
- Medical Assisting (p. 205)
- Nuclear Plant Inspection (p. 211)
- Office Administration/General Clerical Skills (p. 217)
- Office Administration/Word Processing Operator (p. 217)
- Ophthalmic Medical Personnel (p. 220)
- Paralegal Technology (p. 221)
- Residential Interior Decoration (p. 197)
- Residential Interior Decoration & Home Staging (p. 197)
- Restaurant Management (p. 183)
- Simulation & Game Development/Game Design (p. 229)
- Simulation & Game Design/Game Programming (p. 229)
- Simulation & Game Design/3D Modeling (p. 229)
- Simulation & Game Design/Animation (p. 229)
- Welding Technology (p. 239)

## Certificates are awarded in the following areas:

- Basic Law Enforcement Training (p. 127)
- Cosmetology Instructor (p. 151)
- Cytotechnology (p. 157)
- Infant/Toddler Care (p. 162)
- Lateral Entry Teacher (p. 202)
- Nurse Aide (p. 213)
- School-Age Care (p. 162)

## Specialized Certificates

Special short-term certificates are offered in a number of programs. Courses in certificate programs are taken from diploma and degree programs and may be completed within 12 to 18 semester credit hours. A student may earn certificates that build to earning a diploma or degree. A student may earn a certificate(s) in the same semester that he or she earns a degree or diploma. To earn a certificate the following conditions must have been fulfilled:

1. Official copies of all high school and college transcripts must be on file in the student's record at Central Piedmont (when this is a certification requirement).
2. All required courses must be completed within the student's program of study.
3. The final thirty percent (30%) of credits earned must be from Central Piedmont.
4. A Grade Point Average (GPA) of 2.0 or higher must be earned within the certificate program.

## Accounting and Finance

The Accounting and Finance curriculum is designed to provide students with the knowledge and skills necessary for employment and growth in the accounting and finance profession. Accountants and finance professionals assemble and analyze, process and communicate essential information about financial operations.

Course work may include accounting, finance, ethics, business law, computer applications, financial planning, insurance, marketing, real estate, selling and taxation. Related skills are developed through the study of communications, computer applications, financial analysis, critical thinking skills and ethics.

Graduates should qualify for entry-level accounting and finance positions in many types of organizations including accounting firms, small businesses, manufacturing firms, banks, hospitals, school systems and governmental agencies.

Advancement in the accounting and finance profession is realized with work experience and additional education. For more information, call the Business and Accounting Division office at 704.330.4228.

For specific information about potential positions and wages in Accounting and Finance employment, visit the Central Piedmont Career Coach website.

## Accounting and Finance (A25800)

### Degree Awarded

The Associate in Applied Science Degree – Accounting and Finance is awarded by the college upon completion of this program. Two tracks are available:

- Accounting and Finance - Accounting Track (A25800A) (p. 113)
- Accounting and Finance - Financial Services (A25800F) (p. 114)

### Admissions

- A high school diploma or equivalent is required.
- Complete the general application to Central Piedmont.
- Submit high school transcripts and any college transcripts to Admissions, Records and Registration.
- Request that all former college transcripts be evaluated for transfer credit.
- Accounting, business and economic college level courses taken more than 10 years ago are not accepted.
- Central Piedmont placement tests are required in reading comprehension and algebra. Developmental courses in English and mathematics are available for students to build basic skills and knowledge. All developmental courses needed must be completed prior to beginning courses with these prefixes: ACC, BUS, ECM, INT, LOG and MKT.
- Attend a counseling/orientation appointment following placement testing.
- Meet with the program chair for advisement regarding program sequence of courses and course registration. Call the Business and Accounting Division at 704.330.4228 for an appointment.
- Many courses have prerequisites or co-requisites. Check the Courses section for details.

## Transferring to Senior Institution

To transfer courses more effectively, students intending to transfer to a senior institution should check with that college for its general education, program and GPA requirements.

Students enrolled in the Accounting program who think that they may decide to transfer to a senior institution should take course MAT 143 or higher.

## Contact Information

The Accounting and Finance program is in the Business and Accounting Division. For more information, call the Business and Accounting Division at 704.330.4228.

## Accounting and Finance - Accounting Track (A25800A)

### General Education Requirements

ENG 111	Writing and Inquiry	3.0
Select one of the following:		3.0
ENG 112	Writing and Research in the Disciplines	
ENG 114	Professional Research & Reporting	
Select one of the following:		3.0
COM 110	Introduction to Communication	
COM 231	Public Speaking	
Select one of the following:		3.0
MAT 143	Quantitative Literacy	
MAT 152	Statistical Methods I	
MAT 171	Precalculus Algebra	
Select one of the following:		3.0
ART 111	Art Appreciation	
ART 114	Art History Survey I	
ART 115	Art History Survey II	
HUM 120	Cultural Studies	
HUM 130	Myth in Human Culture	
MUS 110	Music Appreciation	
MUS 112	Introduction to Jazz	
PHI 215	Philosophical Issues	
PHI 240	Introduction to Ethics	
REL 110	World Religions	
Select one of the following:		3.0
ECO 251	Principles of Microeconomics	
ECO 252	Principles of Macroeconomics	
POL 120	American Government	
PSY 150	General Psychology	
SOC 210	Introduction to Sociology	
HIS 111	World Civilizations I	
HIS 112	World Civilizations II	
HIS 131	American History I	
HIS 132	American History II	
<b>Major Requirements</b>		
ACC 120	Principles of Financial Accounting	4.0
ACC 121	Principles of Managerial Accounting	4.0
ACC 129	Individual Income Taxes	3.0
ACC 149	Introduction to Accounting Spreadsheets	2.0

Programs of Study

ACC 220	Intermediate Accounting I	4.0
ACC 221	Intermediate Accounting II	4.0
ACC 269	Auditing & Assurance Services	3.0
Select one of the following:		3.0
ACC 140	Payroll Accounting	
ACC 150	Accounting Software Applications	
Other Major Requirements		
BUS 115	Business Law I	3.0
CIS 110	Introduction to Computers	3.0
Select one of the following:		3.0
BAF 143	Financial Planning	
BUS 125	Personal Finance	
BUS 225	Business Finance	
Select one of the following:		3.0
ECO 251	Principles of Microeconomics	
ECO 252	Principles of Macroeconomics	
Select 11 hours from the following:		11.0
ACC 130	Business Income Taxes	
ACC 140	Payroll Accounting	
ACC 150	Accounting Software Applications	
ACC 225	Cost Accounting	
ACC 240	Gov & Not-For-Profit Acct	
ACC 250	Advanced Accounting	
ACC 270	International Accounting	
BUS 110	Introduction to Business	
BUS 234	Training and Development	
BUS 240	Business Ethics	
BUS 253	Leadership and Management Skills	
INT 110	International Business	
LOG 110	Introduction to Logistics	
LOG 125	Transportation Logistics	
MKT 120	Principles of Marketing	
MKT 123	Fundamentals of Selling	
MKT 232	Social Media Marketing	
WBL 111	Work-Based Learning I	
WBL 112	Work-Based Learning I	
FRE 111 & FRE 181	Elementary French I and French Lab 1	
FRE 112 & FRE 182	Elementary French II and French Lab 2	
GER 111 & GER 181	Elementary German I and German Lab 1	
GER 112 & GER 182	Elementary German II and German Lab 2	
SPA 111 & SPA 181	Elementary Spanish I and Spanish Lab 1	
SPA 112 & SPA 182	Elementary Spanish II and Spanish Lab 2	
Total Credits		68

## Accounting and Finance - Financial Services Track (A25800F)

### General Education Requirements

ENG 111	Writing and Inquiry	3.0
Select one of the following:		3.0
ENG 112	Writing and Research in the Disciplines	
ENG 114	Professional Research & Reporting	
Select one of the following:		3.0
COM 110	Introduction to Communication	
COM 231	Public Speaking	
Select one of the following:		3.0
MAT 143	Quantitative Literacy	
MAT 152	Statistical Methods I	
MAT 171	Precalculus Algebra	
Select one of the following:		3.0
ART 111	Art Appreciation	
ART 114	Art History Survey I	
ART 115	Art History Survey II	
HUM 120	Cultural Studies	
HUM 130	Myth in Human Culture	
MUS 110	Music Appreciation	
MUS 112	Introduction to Jazz	
PHI 215	Philosophical Issues	
PHI 240	Introduction to Ethics	
REL 110	World Religions	
Select one of the following:		3.0
ECO 251	Principles of Microeconomics	
ECO 252	Principles of Macroeconomics	
POL 120	American Government	
PSY 150	General Psychology	
SOC 210	Introduction to Sociology	
HIS 111	World Civilizations I	
HIS 112	World Civilizations II	
HIS 131	American History I	
HIS 132	American History II	
Major Requirements		
ACC 120	Principles of Financial Accounting	4.0
ACC 121	Principles of Managerial Accounting	4.0
ACC 149	Introduction to Accounting Spreadsheets	2.0
ACC 220	Intermediate Accounting I	4.0
ACC 269	Auditing & Assurance Services	3.0
BAF 121	Economics for Bankers	3.0
Other Major Requirements		
BUS 115	Business Law I	3.0
CIS 110	Introduction to Computers	3.0
Select 9 hours from the following:		9.0
ACC 210	Enterprise Risk Management	
BAF 143	Financial Planning	
BUS 125	Personal Finance	
BUS 225	Business Finance	
Select one of the following:		3.0
ECO 251	Principles of Microeconomics	

ECO 252	Principles of Macroeconomics	
Select 11 hours from the following:		11.0
ACC 270	International Accounting	
BUS 110	Introduction to Business	
BUS 234	Training and Development	
BUS 240	Business Ethics	
BUS 253	Leadership and Management Skills	
INT 110	International Business	
LOG 110	Introduction to Logistics	
LOG 125	Transportation Logistics	
MKT 120	Principles of Marketing	
MKT 123	Fundamentals of Selling	
MKT 232	Social Media Marketing	
WBL 111	Work-Based Learning I	
WBL 112	Work-Based Learning I	
FRE 111 & FRE 181	Elementary French I and French Lab 1	
FRE 112 & FRE 182	Elementary French II and French Lab 2	
GER 111 & GER 181	Elementary German I and German Lab 1	
GER 112 & GER 182	Elementary German II and German Lab 2	
SPA 111 & SPA 181	Elementary Spanish I and Spanish Lab 1	
SPA 112 & SPA 182	Elementary Spanish II and Spanish Lab 2	
Total Credits		67

**No diplomas are offered in Accounting and Finance.**

**Accounting and Finance Certificates (C25800)**

- Accounting and Finance Certificate Specialization in Accounting (C25800-C1) (p. 115)
- Accounting and Finance Certificate Specialization in Tax (C25800-C2) (p. 115)
- Accounting and Finance Certificate Specialization in Professional Accounting Certificate I (C25800-C3) (p. 115)
- Accounting and Finance Certificate Specialization in Professional Accounting Certificate II (C25800-C4) (p. 116)
- Accounting and Finance Certificate Specialization in Individual Finance (C25800-C5) (p. 116)
- Accounting and Finance Certificate Specialization in Business Financial Services (C25800-C6) (p. 116)

**Accounting and Finance Certificate with a Specialization in Accounting (C25800-C1)**

The certificate is designed to provide the student with a concentrated course of study in the field of accounting. Upon completion of the six courses, a certificate is awarded by the college. Courses for the certificate may be applied toward the Associate in Applied Science Degree –

Accounting and Finance. For more information, call the Business and Accounting Division at 704.330.4228.

**Major Requirements**

ACC 120	Principles of Financial Accounting	4.0
ACC 121	Principles of Managerial Accounting	4.0
CIS 110	Introduction to Computers	3.0
ACC 149	Introduction to Accounting Spreadsheets	2.0
ACC 150	Accounting Software Applications	2.0
Total Credits		15

To add existing certificate under new Program (AFAP).

**Accounting and Finance Certificate with a Specialization in Tax (C25800-C2)**

The certificate is designed to provide the student with a concentrated course of study in the field of taxation. Upon completion of the six courses, a certificate is awarded by the college. Courses for the certificate may be applied toward the Associate in Applied Science Degree – Accounting and Finance. For more information, call the Business and Accounting Division at 704.330.4228.

**Major Requirements**

ACC 120	Principles of Financial Accounting	4.0
ACC 129	Individual Income Taxes	3.0
CIS 110	Introduction to Computers	3.0
ACC 140	Payroll Accounting	2.0
ACC 130	Business Income Taxes	3.0
Total Credits		15

**Accounting and Finance Certificate with a Specialization in Professional Accounting Certificate I (C25800-C3)**

This certificate is designed to provide the student with a concentrated course of study in the field of accounting with an emphasis on taxation and ethics. The courses included in this certificate help prepare students for the Regulation portion of the CPA Exam. Upon completion of the six courses, 17 credit hours, a certificate is awarded by the College. The courses for the certificate may be applied toward the Associate in Applied Science Degree - Accounting and Finance. This certificate is an ideal path towards the 30 hours of accounting courses needed (along with a total of 150 hours) to sit for the CPA Exam. For more information, call the Business and Accounting Division at 704.330.4228.

**Major Requirements**

ACC 120	Principles of Financial Accounting	4.0
ACC 121	Principles of Managerial Accounting	4.0
ACC 129	Individual Income Taxes	3.0
ACC 130	Business Income Taxes	3.0
BUS 240	Business Ethics	3.0
Total Credits		17



## Accounting and Finance Certificate with a Specialization in Professional Accounting Certificate II (C25800-C4)

This certificate is designed to provide students with a concentrated course of study in the field of accounting, with an emphasis on corporate accounting, as well as governmental accounting and auditing. The courses included in this certificate help prepare students for the Auditing and Attestation, as well as the Financial Accounting and Report portions of the CPA Exam. Upon completion of the six course, 17 credit hours, a certificate is awarded by the College. The courses for the certificate may be applied toward the Associate in Applied Science Degree - Accounting and Finance. This certificate is an ideal path toward the 30 hours of accounting courses needed (along with a total of 150 hours) to sit for the CPA Exam. For more information, call the Business and Accounting Division at 704.330.4228.

### Major Requirements

ACC 220	Intermediate Accounting I	4.0
ACC 221	Intermediate Accounting II	4.0
ACC 225	Cost Accounting	3.0
ACC 240	Gov & Not-For-Profit Acct	3.0
or ACC 250	Advanced Accounting	
ACC 269	Auditing & Assurance Services	3.0
Total Credits		17

## Accounting and Finance Certificate with a Specialization in Individual Finance (C25800-C5)

The certificate is designed to provide the student with a concentrated course of study in the field of individual finance. Upon completion of the five courses, a certificate is awarded by the college. Courses for the certificate may be applied toward the Associate in Applied Science Degree – Accounting and Finance. For more information, call the Business and Accounting Division at 704.330.4228.

### Major Requirements

ACC 120	Principles of Financial Accounting	4.0
ECO 251	Principles of Microeconomics	3.0
BAF 121	Economics for Bankers	3.0
BUS 125	Personal Finance	3.0
BAF 143	Financial Planning	3.0
Total Credits		16

## Accounting and Finance Certificate with a Specialization in Business Financial Services (C25800-C6)

The certificate is designed to provide the student with a concentrated course of study in business financial services. Upon completion of the five courses, a certificate is awarded by the college. Courses for the certificate may be applied toward the Associate in Applied Science Degree – Accounting and Finance. For more information, call the Business and Accounting Division at 704.330.4228.

### Major Requirements

ACC 120	Principles of Financial Accounting	4.0
ECO 251	Principles of Microeconomics	3.0

BAF 121	Economics for Bankers	3.0
ACC 210	Enterprise Risk Management	3.0
BUS 225	Business Finance	3.0
Total Credits		16

## Advertising + Graphic Design

The future belongs to those who are able to solve problems with courageous creativity. The Advertising + Graphic Design curriculum is designed to provide students with the knowledge and skills to be the next creative leaders in our community. Graduates of the program are prepared for employment in creative industries, including graphic design firms, advertising agencies, marketing communications and in-house creative groups.

Students learn the development of concepts and design for visual communication materials such as ads, corporate and brand identity programs, print and interactive media.

For specific information about potential positions and wages in Advertising + Graphic Design employment, visit the Central Piedmont Career Coach website.

## Advertising + Graphic Design (A30100) Degree Awarded

The Associate in Applied Science Advertising + Graphic Design Degree is awarded by the college upon completion of this program.

### Admissions

- High school diploma or equivalent is required.
- Take placement tests to determine enrollment in English (ENG) and mathematics (MAT) courses.
- Many courses have prerequisites or co-requisites; check the Courses section for details.

### Contact Information

The Advertising + Graphic Design program is in the Applied Technologies Division at the Harper Campus. For more information, contact the program office at 704.330.4481.

### General Education Requirements

ENG 111	Writing and Inquiry	3.0
COM 231	Public Speaking	3.0
ART 115	Art History Survey II	3.0
Select 3 credits of the following:		3.0
ENG 112	Writing and Research in the Disciplines	
ENG 113	Literature-Based Research	
ENG 114	Professional Research & Reporting	
Select 3 credits of the following:		3.0
MAT 110	Mathematical Measurement and Literacy	
MAT 143	Quantitative Literacy	
MAT 152	Statistical Methods I	
MAT 171	Precalculus Algebra	
MAT 271	Calculus I	
Select 3 credits of the following:		3.0
PSY 150	General Psychology	

SOC 210	Introduction to Sociology	
<b>Major Requirements</b>		
GRD 110	Typography I	3.0
GRD 280	Portfolio Design	4.0
GRD 121	Drawing Fundamentals I	2.0
GRD 131	Illustration I	2.0
GRD 141	Graphic Design I	4.0
GRD 142	Graphic Design II	4.0
GRD 241	Graphic Design III	4.0
GRD 242	Graphic Design IV	4.0
GRD 151	Computer Design Basics	3.0
GRD 152	Computer Design Techniques I	3.0
GRD 111	Typography II	3.0
GRD 113	History of Graphic Design	3.0
GRD 188	Graphic Design for Web I	3.0
GRD 265	Digital Print Production	3.0
GRD 271	Multimedia Design I	2.0
GRD 273	New Media Design Communication	2.0
GRD 282	Advertising Copywriting	2.0
WBL 111	Work-Based Learning I	1.0
Total Credits		70

GRD 151	Computer Design Basics	3.0
GRD 152	Computer Design Techniques I	3.0
GRD 188	Graphic Design for Web I	3.0
GRD 271	Multimedia Design I	2.0
Total Credits		15

## Air Conditioning, Heating and Refrigeration Technology

The Air Conditioning, Heating and Refrigeration Technology (AHR) curriculum provides the basic knowledge for developing skills fundamental to working with residential and light commercial systems. Graduates are able to assist in the start-up, preventive maintenance, service, repair, and installation of residential and light commercial systems. A.A.S. graduates also can articulate an understanding of system selection, air balancing, building automation, system applications, and indoor air quality.

Topics include heating, comfort cooling, refrigeration, electricity, and schematic diagrams, along with residential and commercial controls methodologies. Two nationally recognized certificates in Building Automation are available, along with EPA 608 certification, as required by the Environmental Protection Agency for all technicians who handle refrigerants.

Most classes include extensive hands on exposure and training with industry tools and instruments working on equipment types such as air conditioning, furnaces, heat pumps, mini-splits, and advanced, computer controlled systems. Safety is integral to all coursework. Students are immersed in discussions around the mechanical and fuel gas codes, residential system sizing, advanced comfort systems, and indoor air quality among other discipline discussions.

Throughout the program students are exposed to the Critical Core; an articulated pathway for students to achieve proficiency in Critical Thinking, Communication (Written & Oral), Personal Growth & Cultural Literacy, and Information Technology & Quantitative Literacy. The Critical Core empowers all AHR students to achieve academic, professional and personal success.

For specific information about potential positions and wages in Air Conditioning, Heating and Refrigeration employment, visit the Central Piedmont Career Coach website.

## Air Conditioning, Heating and Refrigeration Technology (A35100)

### Degree Awarded

An A.A.S. Degree in Air Conditioning, Heating and Refrigeration Technology is awarded by the college upon completion of this program.

### Admissions

- Completion of a high school diploma is required for entering A.A.S. program.
- Many courses have prerequisites or co-requisites; check the Courses section for details.

### Contact Information

For more information, call the program office at 704.330.4446 or the Construction Technologies Division at 704.330.4408.

## No diplomas are offered in Advertising + Graphic Design.

### Advertising + Graphic Design Certificates (C30100)

- Advertising and Graphic Design Certificate Specialization in Introduction to Graphic Design (C30100-C6) (p. 117)
- Advertising and Graphic Design Certificate Specialization in Introduction to Graphic Design for Web (C30100-C8) (p. 117)

### Advertising and Graphic Design Certificate Specialization in Introduction to Graphic Design (C30100-C6)

This certificate also is available to high school students through Career and College Promise.

#### MAJOR REQUIREMENTS

GRD 141	Graphic Design I	4.0
GRD 142	Graphic Design II	4.0
GRD 151	Computer Design Basics	3.0
GRD 110	Typography I	3.0
GRD 188	Graphic Design for Web I	3.0
Total Credits		17

### Advertising and Graphic Design Certificate Specialization in Introduction to Graphic Design for Web (C30100-C8)

This certificate also is available to high school students through Career and College Promise.

#### Major Requirements

GRD 141	Graphic Design I	4.0
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**General Education Requirements**

ENG 111	Writing and Inquiry	3.0
ENG 112	Writing and Research in the Disciplines	3.0
COM 231	Public Speaking	3.0
Take 1 course from the following:		3.0
MAT 110	Mathematical Measurement and Literacy	
MAT 171	Precalculus Algebra	
Select 3 credits of the following:		3.0
ECO 251	Principles of Microeconomics	
ECO 252	Principles of Macroeconomics	
HIS 111	World Civilizations I	
HIS 112	World Civilizations II	
HIS 131	American History I	
HIS 132	American History II	
POL 120	American Government	
PSY 150	General Psychology	
SOC 210	Introduction to Sociology	
Select 3 credits of the following:		3.0
ART 111	Art Appreciation	
ART 114	Art History Survey I	
ART 115	Art History Survey II	
HUM 120	Cultural Studies	
HUM 130	Myth in Human Culture	
MUS 110	Music Appreciation	
MUS 112	Introduction to Jazz	
PHI 215	Philosophical Issues	
PHI 240	Introduction to Ethics	
REL 110	World Religions	

**Major Requirements**

AHR 110	Introduction to Refrigeration	5.0
AHR 112	Heating Technology	4.0
AHR 113	Comfort Cooling	4.0
AHR 114	Heat Pump Technology	4.0
AHR 115	Refrigeration Systems	2.0
AHR 211	Residential System Design	3.0
AHR 212	Advanced Comfort Systems	4.0
AHR 213	HVACR Building Code	2.0
AHR 235	Refrigeration Design	3.0
ELC 111	Introduction to Electricity	3.0
WOL 110	Basic Construction Skills	3.0

**Other Major Requirements**

AHR 130	HVAC Controls	3.0
AHR 151	HVAC Duct Systems I	2.0
AHR 160	Refrigerant Certification	1.0
AHR 180	HVACR Customer Relations	1.0
BPR 130	Print Reading-Construction	3.0

**Technical Electives**

Select 2 credits of the following:		2.0
AHR 215	Commercial HVAC Controls	
AHR 255	Indoor Air Quality	
AHR 263	Energy Management	
WBL 111	Work-Based Learning I	

WBL 112	Work-Based Learning I	
WLD 112	Basic Welding Processes	
Total Credits		67

**Air Conditioning, Heating and Refrigeration Technology - HVAC-R Controls Track (A35100C) Degree Awarded**

An A.A.S. Degree in Air Conditioning, Heating and Refrigeration Technology is awarded by the college upon completion of this program.

**Admissions**

- Completion of a high school diploma is required for entering A.A.S. program.
- Many courses have prerequisites or co-requisites; check the Courses section for details.

**Contact Information**

For more information, call the program office at 704.330.4446 or the Construction Technologies Division at 704.330.4408.

**General Education Requirements**

ENG 111	Writing and Inquiry	3.0
ENG 112	Writing and Research in the Disciplines	3.0
COM 231	Public Speaking	3.0
Select one course from the following:		3.0
MAT 110	Mathematical Measurement and Literacy	
MAT 171	Precalculus Algebra	
Select one course from the following:		3.0
ECO 251	Principles of Microeconomics	
ECO 252	Principles of Macroeconomics	
HIS 111	World Civilizations I	
HIS 112	World Civilizations II	
HIS 131	American History I	
HIS 132	American History II	
POL 120	American Government	
PSY 150	General Psychology	
SOC 210	Introduction to Sociology	
Select one course from the following:		3.0
ART 111	Art Appreciation	
ART 114	Art History Survey I	
ART 115	Art History Survey II	
HUM 120	Cultural Studies	
HUM 130	Myth in Human Culture	
MUS 110	Music Appreciation	
MUS 112	Introduction to Jazz	
PHI 215	Philosophical Issues	
PHI 240	Introduction to Ethics	
REL 110	World Religions	

**Major Core Requirements:**

AHR 110	Introduction to Refrigeration (Major Core Requirements)	5.0
AHR 112	Heating Technology	4.0
AHR 113	Comfort Cooling	4.0

AHR 114	Heat Pump Technology	4.0
AHR 211	Residential System Design	3.0
AHR 212	Advanced Comfort Systems	4.0
AHR 213	HVACR Building Code	2.0
ELC 111	Introduction to Electricity (Other Required Coursework)	3.0
AHR 130	HVAC Controls	3.0
<b>Other major requirements:</b>		
AHR 160	Refrigerant Certification	1.0
AHR 180	HVACR Customer Relations	1.0
AHR 215	Commercial HVAC Controls	2.0
AHR 255	Indoor Air Quality	2.0
AHR 263	Energy Management	2.0
BPR 130	Print Reading-Construction	3.0
WOL 110	Basic Construction Skills	3.0
Select three hours from the following courses:		3.0
ARC 225	Architectural Building Information Modeling I	
ELC 117	Motors and Controls	
ELC 125	Diagrams and Schematics	
ELC 128	Introduction to Programmable Logic Controller	
WBL 110	World of Work	
WBL 111	Work-Based Learning I	
WBL 121	Work-Based Learning II	
Total Credits		67

**No diplomas are offered in Air Conditioning, Heating and Refrigeration Technology.**

**The specialization certificates listed below can be earned in the Air Conditioning, Heating and Refrigeration (A35100) program.**

**Air Conditioning, Heating and Refrigeration Technology Certificate (C35100)**

- Air Conditioning, Heating & Refrigeration Technology Certificate Specialization in Refrigeration Systems (C35100-C5 (p. 119))
- Air Conditioning, Heating & Refrigeration Technology Certificate Specialization in Apartment/Rental Maintenance (C35100-C9) (p. 119)
- Air Conditioning, Heating & Refrigeration Technology Certificate Specialization in HVAC-R Industry Introduction (C35100-11) (p. 119)
- Air Conditioning, Heating & Refrigeration Technology Certificate Specialization in Residential Service (C35100-13) (p. 119)
- Air Conditioning, Heating & Refrigeration Technology Certificate Specialization in Indoor Air Quality and Comfort (C35100-14) (p. 120)
- Air Conditioning, Heating & Refrigeration Technology Certificate Specialization in Energy Management & Building Automation (C35100-15) (p. 120)

- Air Conditioning, Heating & Refrigeration Technology Certificate Specialization in Advanced HVAC-R Controls (C35100-16) (p. 120)
- Air Conditioning, Heating & Refrigeration Technology Certificate Specialization in HVAC Installation (C35100-53) (p. 120)

**Requirements**

- Completion of a high school diploma or equivalent is encouraged as the foundation of a career in this area.
- Many courses have prerequisites or co-requisites; check the Courses section for details.

**Contact Information**

For more information, call the program office at 704.330.4479 or the Construction Technologies Division at 704.330.4408.

**Air Conditioning, Heating & Refrigeration Technology Certificate Specialization in Refrigeration Systems (C35100-C5)**

**Major Requirements**

AHR 110	Introduction to Refrigeration	5.0
ELC 111	Introduction to Electricity	3.0
AHR 130	HVAC Controls	3.0
AHR 115	Refrigeration Systems	2.0
AHR 180	HVACR Customer Relations	1.0
AHR 235	Refrigeration Design	3.0
Total Credits		17

**Air Conditioning, Heating & Refrigeration Technology Certificate Specialization in Apartment/Rental Maintenance (C35100-C9)**

**Major Requirements**

AHR 110	Introduction to Refrigeration	5.0
AHR 160	Refrigerant Certification	1.0
AHR 180	HVACR Customer Relations	1.0
ELC 113	Residential Wiring	4.0
WOL 110	Basic Construction Skills	3.0
Total Credits		14

**Air Conditioning, Heating and Refrigeration Technology Certificate Specialization in HVAC-R Industry Introduction (C35100-11)**

**Major Requirements**

AHR 110	Introduction to Refrigeration	5.0
AHR 160	Refrigerant Certification	1.0
AHR 180	HVACR Customer Relations	1.0
AHR 151	HVAC Duct Systems I	2.0
ELC 111	Introduction to Electricity	3.0
WOL 110	Basic Construction Skills	3.0
BPR 130	Print Reading-Construction	3.0
Total Credits		18



### Air Conditioning, Heating & Refrigeration Technology Certificate Specialization in Residential Service (C35100-13)

#### Major Requirements

AHR 112	Heating Technology	4.0
AHR 113	Comfort Cooling	4.0
AHR 114	Heat Pump Technology	4.0
AHR 130	HVAC Controls	3.0
Total Credits		15

### Air Conditioning, Heating & Refrigeration Technology Certificate Specialization in Indoor Air Quality and Comfort (C35100-14)

#### Major Requirements

AHR 130	HVAC Controls	3.0
AHR 211	Residential System Design	3.0
AHR 212	Advanced Comfort Systems	4.0
AHR 213	HVACR Building Code	2.0
AHR 255	Indoor Air Quality	2.0
AHR 263	Energy Management	2.0
Total Credits		16

### Air Conditioning, Heating & Refrigeration Technology Certificate Specialization in Energy Management & Building Automation (C35100-15)

#### Major Requirements

AHR 130	HVAC Controls	3.0
AHR 211	Residential System Design	3.0
AHR 212	Advanced Comfort Systems	4.0
AHR 213	HVACR Building Code	2.0
AHR 215	Commercial HVAC Controls	2.0
AHR 263	Energy Management	2.0
Total Credits		16

### Air Conditioning, Heating & Refrigeration Technology Certificate Specialization in Advanced HVAC-R Controls (C35100-16)

#### Major Requirements

AHR 130	HVAC Controls	3.0
AHR 215	Commercial HVAC Controls	2.0
AHR 263	Energy Management	2.0
ELC 117	Motors and Controls	4.0
ELC 125	Diagrams and Schematics	2.0
ELC 128	Introduction to Programmable Logic Controller	3.0
Total Credits		16

### Air Conditioning, Heating and Refrigeration Technology Certificate Specialization in HVAC Installation (C35100-53)

AHR 110	Introduction to Refrigeration	5.0
AHR 112	Heating Technology	4.0
AHR 151	HVAC Duct Systems I	2.0

AHR 160	Refrigerant Certification	1.0
AHR 213	HVACR Building Code	2.0
ELC 111	Introduction to Electricity	3.0
WBL 121M	Work-Based Learning II	1.0
Total Credits		18

## Architectural Technology

The Architectural Technology curriculum prepares individuals to apply technical knowledge and skills to the fields of architecture, construction, construction management, facility management, Architectural Visualization, and other associated professions.

Course work includes instruction in sustainable building and design, building information modeling, building codes, construction materials and methods, architectural graphics, and other topics related to the design and construction occupations.

Graduates of this pathway should qualify for entry-level jobs in architectural, engineering, construction and trades professions as well as positions in industry and government. Students also can transfer into a number of undergraduate design and building sciences BA degree programs with advanced standing. The Associate of Applied Science Degree - Architectural Technology is awarded by the college upon completion of this program.

For specific information about potential positions and wages in Architectural employment, visit the Central Piedmont Career Coach website.

## Architectural Technology (A40100)

### Degree Awarded

The Associate of Applied Science Degree - Architectural Technology is awarded by the college upon completion of this program.

### Admissions

- A high school diploma or equivalent is required.
- Central Piedmont Placement tests are required in English and mathematics. Developmental Studies for math and English classes are available for students to build basic skills and knowledge.
- A counseling/orientation appointment follows placement testing.
- Students should see a faculty advisor before registration.
- Many courses have prerequisites or co-requisites; check the Courses section for details.

Note: The curriculum at Central Piedmont includes an emphasis on computer-aided drafting (CAD), Building Information Modeling (BIM), and related computer courses. Students also gain experience in creating Virtual and Augmented Reality environments, and in laser-cutting and 3D printing fabrication techniques.

### Contact Information

For more information, call the Program Chair at 704.330.2722 extension 7473, the Construction Management Technologies Division at 704.330.4408 or visit the Architectural Technology Program website.

#### General Education Requirements

ART 111	Art Appreciation	3.0
ENG 111	Writing and Inquiry	3.0

ENG 112	Writing and Research in the Disciplines	3.0
COM 231	Public Speaking	3.0
MAT 171	Precalculus Algebra (*Students planning to transfer should select MAT-171.)	3.0
or MAT 121	Algebra/Trigonometry I	
Select 3 credits of the following:		3.0
ECO 251	Principles of Microeconomics	
PSY 150	General Psychology	
SOC 210	Introduction to Sociology	
<b>Major Requirements</b>		
ARC 111	Introduction to Architectural Technology	3.0
ARC 112	Construction Materials & Methods	4.0
ARC 113	Residential Architectural Technology	3.0
ARC 114	Architectural CAD	2.0
ARC 131	Building Codes	3.0
ARC 132	Specifications & Contracts	2.0
BPR 130	Print Reading-Construction	3.0
ARC 212	Commercial Constr Tech	3.0
ARC 213	Design Project	4.0
ARC 214	Architectural Statics	3.0
ARC 215	Architectural Strength of Materials	3.0
ARC 225	Architectural Building Information Modeling I	2.0
ARC 230	Environmental Systems	4.0
ARC 250	Survey of Architecture	3.0
SST 140	Green Building and Design Concepts	3.0
ARC 235	Architectural Portfolio	3.0
<b>Technical Electives</b>		
Select 2 to 8 credits of the following:		2.0
UNCG Interior Architecture Transfer Electives		
PHY 151	College Physics I	
ACA 122	College Transfer Success	
ECU Industrial Technology (Architectural Technology Concentration) Transfer Electives		
PHY 151	College Physics I	
MAT 172	Precalculus Trigonometry	
WCU School of Engineering & Tech- Technical Operations Transfer Electives		
MAT 172	Precalculus Trigonometry	
PHY 151	College Physics I	
UNC Charlotte Civil Engineering Technology Transfer Electives		
PHY 151	College Physics I	
SRV 110	Surveying I	
CEG 211	Hydrology & Erosion Control	
MAT 172	Precalculus Trigonometry	
Queens University Interior Architecture Transfer Electives		
ASU Building Sciences (Arch Tech Concentration) Transfer Electives		
ACA 122	College Transfer Success	
ARC 221	Architectural 3-D CAD	
PHY 151	College Physics I	
PHY 152	College Physics II	
Non-Transfer Elective Options		
ACA 111	College Student Success	
ARC 160	Residential Design	

ARC 220	Advanced Architectural CAD	
ARC 226	Architectural Building Information Modeling II	
ARC 251	Advanced Survey of Architecture	
ARC 262	Architectural Animation & Video	
ARC 221	Architectural 3-D CAD	
ART 131	Drawing I	
CEG 151	Cad for Engineering Technology	
CST 241	Planning/Estimating I	
DFT 154	Intro to Solid Modeling	
SST 120	Energy Use Analysis	
SST 130	Modeling Renewable Energy	
WBL 111	Work-Based Learning I	
WBL 112	Work-Based Learning I	
Total Credits		68

## No diplomas are offered in Architectural Technology.

### Architectural Technology Certificates

- Architectural Technology Certificate Specialization in Residential Architectural Technology (C40100-C2) (p. 121)
- Architectural Technology Certificate Specialization in Sustainability (C40100-C4) (p. 121)
- Architectural Technology Certificate Specialization in Accelerated CAD/BIM Designer Track (C40100-C5) (p. 122)
- Architectural Technology Certificate Specialization in Accelerated CAD/BIM Designer Track - Level II (C40100-C6) (p. 122)
- Architectural Technology Certificate Specialization in Fast Track Computer-Aided Drafting and Design (C40100-52) (p. 122)

### Architectural Technology Certificate Specialization in Residential Architectural Technology (C40100-C2)

#### Major Requirements

ARC 111	Introduction to Architectural Technology	3.0
ARC 112	Construction Materials & Methods	4.0
ARC 113	Residential Architectural Technology	3.0
ARC 114	Architectural CAD	2.0
ARC 160	Residential Design	3.0
ARC 225	Architectural Building Information Modeling I	2.0
Total Credits		17

Graduates from this certificate should be able to provide support to the Green Building and Facility Management Industries. This certificate also is available to high school students enrolled in Career & College Promise.

### Architectural Technology Certificate Specialization in Sustainability (C40100-C4)

#### Major Requirements

BPR 130	Print Reading-Construction	3.0
ARC 114	Architectural CAD	2.0
ARC 225	Architectural Building Information Modeling I	2.0
SST 120	Energy Use Analysis	3.0
SST 130	Modeling Renewable Energy	3.0

SST 140	Green Building and Design Concepts	3.0
Total Credits		16

### Architectural Technology Certificate Specialization in Accelerated CAD/BIM Designer Track - Level I (C40100-C5)

Major Requirements

ARC 111	Introduction to Architectural Technology	3.0
MAT 171	Precalculus Algebra	4.0
CEG 151	Cad for Engineering Technology	3.0
ARC 225	Architectural Building Information Modeling I	2.0
ARC 114	Architectural CAD	2.0
BPR 130	Print Reading-Construction	3.0
Total Credits		17

This is the first half of a nested curriculum sequence designed to prepare students for careers in Computer Aided Drafting and/or Building Information Modeling.

### Architectural Technology Certificate Specialization in Accelerated CAD/BIM Designer Track - Level II (C40100-C6)

Major Requirements

ARC 226	Architectural Building Information Modeling II	2.0
DFT 154	Intro to Solid Modeling	3.0
ARC 221	Architectural 3-D CAD	3.0
ARC 230	Environmental Systems	4.0
ARC 235	Architectural Portfolio	3.0
WBL 111	Work-Based Learning I	1.0
Total Credits		16

This is the second half of a nested curriculum sequence designed to prepare students for careers in Computer Aided Drafting and/or Building Information Modeling.

### Architectural Technology Certificate Specialization in Fast Track Computer-Aided Drafting and Design (C40100-52)

Major Requirements

ARC 111	Introduction to Architectural Technology	3.0
ARC 112	Construction Materials & Methods	4.0
ARC 114	Architectural CAD	2.0
ARC 132	Specifications & Contracts	2.0
ARC 221	Architectural 3-D CAD	3.0
ARC 225	Architectural Building Information Modeling I	2.0
WBL 121	Work-Based Learning II	1.0
Total Credits		17

Graduates with this certificate should be able to obtain entry-level positions in Computer Aided Drafting or Building Information Modeling. This certificate also is available to high school students enrolled in Career and College Promise.

## Automotive Systems Technology

The Automotive Systems Technology curriculum prepares individuals for employment as Automotive Service Technicians. It provides an introduction to automotive careers and increases student awareness of the challenges associated with this fast and ever-changing field.

Classroom and lab experiences integrate technical and academic course work. Emphasis is placed on theory, servicing and operation of brakes, electrical/electronic systems, engine performance, steering/suspension, automatic transmission/transaxles, engine repair, climate control and manual drive trains.

Upon completion of this curriculum, students should be prepared to take the ASE exam and be ready for full-time employment in dealerships and repair shops in the automotive service industry.

For specific information about potential positions and wages in Automotive Systems employment, visit the Central Piedmont Career Coach website.

### Automotive Systems Technology (A60160)

#### Degree Awarded

The Associate in Applied Science Degree - Automotive Systems Technology is awarded by the college upon completion of this program.

#### Admissions

- A high school diploma or equivalent is required.
- Many courses have prerequisites or co-requisites; check the Courses section for details.

#### Program Accreditation

The BMW-ADP and GM-ASEP programs are Master Certified by the National Automotive Technician Foundation (NATEF) Automotive Service Excellence (A.S.E.).

#### Program Manufacturer Partners

General Motors' Automotive Service Excellence Program (ASEP), and BMW (ADP) are options for this associate degree program. In addition, CPCC currently offers a Honda Professional Automotive Career Training (PACT) program certificate as an Express Service Technician. Contact the Transport Systems Division Cooperative Education Coordinator at 704.330.4157 or the Transport Systems Technology Division at 704.330.4122 for manufacturer program information.

Note: Students must furnish required hand tools and protective clothing, as well as textbooks. A list of these items can be obtained from an instructor or by contacting the Program Chair at 704.330.4183.

#### Contact Information

The Automotive Systems Technology program is in the Transport Systems Technologies Division, which can be reached at 704.330.4122.

#### General Education Requirements

ENG 111	Writing and Inquiry	3.0
Take 3 credits from the following:		3.0
ENG 112	Writing and Research in the Disciplines	
ENG 113	Literature-Based Research	
	or ENG 114 Professional Research & Reporting	
COM 110	Introduction to Communication	3.0

or COM 231	Public Speaking	
Select 3 credits of the following:		3.0
MAT 110	Mathematical Measurement and Literacy	
MAT 143	Quantitative Literacy	
MAT 152	Statistical Methods I	
MAT 171	Precalculus Algebra	
Select 3 credits of the following:		3.0
ART 111	Art Appreciation	
ART 114	Art History Survey I	
ART 115	Art History Survey II	
HUM 120	Cultural Studies	
HUM 130	Myth in Human Culture	
MUS 110	Music Appreciation	
MUS 112	Introduction to Jazz	
PHI 215	Philosophical Issues	
PHI 240	Introduction to Ethics	
REL 110	World Religions	
Select 3 credits of the following:		3.0
ECO 251	Principles of Microeconomics	
ECO 252	Principles of Macroeconomics	
HIS 111	World Civilizations I	
HIS 112	World Civilizations II	
HIS 131	American History I	
HIS 132	American History II	
POL 120	American Government	
PSY 150	General Psychology	
SOC 210	Introduction to Sociology	

**Major Requirements**

TRN 110	Introduction to Transport Technology	2.0
TRN 120	Basic Transportation Electricity	5.0
TRN 140	Transportation Climate Control	2.0
TRN 145	Advanced Transportation Electronics	3.0
AUT 141	Suspension & Steering Systems	3.0
AUT 151	Brake Systems	3.0
AUT 181	Engine Performance 1	3.0
AUT 183	Engine Performance 2	4.0
TRN 140A	Transportation Climate Control Lab	2.0
TRN 170	Pc Skills for Transportation	2.0
AUT 116	Engine Repair	3.0
AUT 163	Advanced Automotive Electricity	3.0
AUT 221	Automatic Transmissions/Transaxles	3.0
AUT 231	Manual Transmissions/Transaxles/Drive Trains	3.0

**Technical Electives**

Select 9 credits of the following:		9.0
TRN 120A	Basic Transportation Electrical Lab	
AUT 113	Automotive Servicing I	
AUT 114	Safety and Emissions	
AUT 114A	Safety and Emissions Lab	
AUT 116A	Engine Repair Lab	
AUT 141A	Suspension & Steering Lab	
AUT 151A	Brakes Systems Lab	
AUT 213	Automotive Servicing 2	

AUT 221A	Automatic Transmissions/Transaxles Lab
AUT 231A	Manual Transmissions/Transaxles/Drive Trains Lab
WBL 112	Work-Based Learning I
WBL 122	Work-Based Learning II
WBL 132	Work-Based Learning III
WBL 212	Work-Based Learning IV
AUT 212	Auto Shop Management
ATT 115	Green Trans Safety and Service
ATT 125	Hybrid-Electric Transportation
ATT 140	Emerging Transportation Technology
AUT 281	Advanced Engine Performance

Total Credits 68

## Automotive Systems Technology Diploma (D60160)

This diploma is also available for students enrolled in Career & College Promise.

### Diploma Awarded

A diploma in Automotive Systems Technology is awarded by the College upon completion of this program.

### Admissions

- Completion of a high school diploma or equivalent is required as the foundation of a career in this area.
- Many courses have prerequisites or co-requisites; check the Courses section for details.

### Program Accreditation

This program is Master Certified by the National Automotive Technician Foundation (NATEF) Automotive Service Excellence (A.S.E.).

Note: Students must furnish required hand tools and protective clothing, as well as textbooks. A list of these items can be obtained from an instructor or program chair by contacting the program chair at 704.330.4183.

### Contact Information

The Automotive Systems Technology program is in the Transport Systems Technologies Division. For more information, call the program office at 704.330.4122 or the program chair at 704.330.4183.

Choose 42 hours from Major and Related Course Requirements listed below:

**General Education Requirements**

ENG 111	Writing and Inquiry	3.0
MAT 110	Mathematical Measurement and Literacy	3.0

**Major Requirements**

TRN 110	Introduction to Transport Technology	2.0
TRN 120	Basic Transportation Electricity	5.0
TRN 140	Transportation Climate Control	2.0
AUT 141	Suspension & Steering Systems	3.0
AUT 151	Brake Systems	3.0
AUT 181	Engine Performance 1	3.0
TRN 140A	Transportation Climate Control Lab	2.0



TRN 170	Pc Skills for Transportation	2.0
AUT 116	Engine Repair	3.0
AUT 116A	Engine Repair Lab	1.0
AUT 151A	Brakes Systems Lab	1.0
AUT 183	Engine Performance 2	4.0
AUT 221	Automatic Transmissions/Transaxles	3.0
AUT 231	Manual Transmissions/Transaxles/Drive Trains	3.0

**Technical Electives**

Select 1 credit of the following:		1.0
AUT 113	Automotive Servicing I	
WBL 112	Work-Based Learning I	
WBL 122	Work-Based Learning II	
AUT 213	Automotive Servicing 2	
AUT 141A	Suspension & Steering Lab	
TRN 120A	Basic Transportation Electrical Lab	

Total Credits 44

**Automotive Systems Technology Certificates (C60160)**

- Automotive Systems Technology Certificate Specialization in Vehicle Maintenance (C60160-C6) (p. 124)
- Automotive Systems Technology Certificate Specialization in Basic Engine and Electrical (C60160-C7) (p. 124)
- Automotive Systems Technology Certificate Specialization in Advanced Fuel Systems and Electronic Systems (C60160-C8) (p. 124)
- Automotive Systems Technology Certificate Specialization in Advanced Engine Performance Including Chassie Electronics (C60160-C9) (p. 124)
- Automotive Systems Technology Certificate Specialization in Vehicle Driveline Systems (C60160-10) (p. 124)
- Automotive Systems Technology Certificate Specialization in Brake and Alignment (C60160-11) (p. 125)
- Automotive Systems Technology Certificate Specialization in Electrical Vehicle Training (C60160-12) (p. 125)

**Automotive Systems Technology Certificate Specialization in Vehicle Maintenance (C60160-C6)**

**Major Requirements**

TRN 110	Introduction to Transport Technology	2.0
AUT 141	Suspension & Steering Systems	3.0
AUT 151	Brake Systems	3.0
AUT 116	Engine Repair	3.0
AUT 114	Safety and Emissions	2.0
AUT 141A	Suspension & Steering Lab	1.0
AUT 151A	Brakes Systems Lab	1.0
AUT 116A	Engine Repair Lab	1.0
Total Credits		16

**Automotive Systems Technology Certificate Specialization in Basic Engine and Electrical (C60160-C7)**

**Major Requirements**

TRN 110	Introduction to Transport Technology	2.0
TRN 120	Basic Transportation Electricity	5.0
TRN 140	Transportation Climate Control	2.0
TRN 170	Pc Skills for Transportation	2.0
AUT 116	Engine Repair	3.0
TRN 120A	Basic Transportation Electrical Lab	1.0
TRN 140A	Transportation Climate Control Lab	2.0
AUT 116A	Engine Repair Lab	1.0
Total Credits		18

**Automotive Systems Technology Certificate Specialization in Advanced Fuel Systems and Electronic Systems (C60160-C8)**

**Major Requirements**

TRN 110	Introduction to Transport Technology	2.0
TRN 120	Basic Transportation Electricity	5.0
AUT 181	Engine Performance 1	3.0
AUT 163	Advanced Automotive Electricity	3.0
TRN 120A	Basic Transportation Electrical Lab	1.0
Total Credits		14

**Automotive Systems Technology Certificate Specialization in Advanced Engine Performance Including Chassie Electronics (C60160-C9)**

**Major Requirements**

TRN 110	Introduction to Transport Technology	2.0
TRN 145	Advanced Transportation Electronics	3.0
AUT 181	Engine Performance 1	3.0
AUT 183	Engine Performance 2	4.0
AUT 163	Advanced Automotive Electricity	3.0
Total Credits		15

**Automotive Systems Technology Certificate Specialization in Vehicle Driveline Systems (C60160-10)**

**Major Requirements**

TRN 110	Introduction to Transport Technology	2.0
AUT 116	Engine Repair	3.0
AUT 221	Automatic Transmissions/Transaxles	3.0
AUT 221A	Automatic Transmissions/Transaxles Lab	1.0
AUT 231	Manual Transmissions/Transaxles/Drive Trains	3.0
Total Credits		12

## Automotive Systems Technology Certificate Specialization in Brake and Alignment (C60160-11)

### Major Requirements

TRN 110	Introduction to Transport Technology	2.0
TRN 120	Basic Transportation Electricity	5.0
AUT 141	Suspension & Steering Systems	3.0
AUT 151	Brake Systems	3.0
AUT 114	Safety and Emissions	2.0
AUT 141A	Suspension & Steering Lab	1.0
AUT 151A	Brakes Systems Lab	1.0
Total Credits		17

## Automotive Systems Technology Certificate Specialization in Electrical Vehicle Training (C60160-12)

### Major Requirements

AUT 212	Auto Shop Management	3.0
AUT 281	Advanced Engine Performance	3.0
ATT 115	Green Trans Safety and Service	2.0
ATT 125	Hybrid-Electric Transportation	4.0
ATT 140	Emerging Transportation Technology	3.0
Total Credits		15

## Baking and Pastry Arts

The Baking and Pastry Arts curriculum is designed to provide students with the skills and knowledge required for employment in the baking/pastry industry, including restaurants, hotels, independent bakery/pastry shops, wholesale/retail markets, and high-volume bakeries or further academic studies.

Students are provided theoretical knowledge and practical applications that develop critical competencies to meet industry demands, including environmental stewardship, operational efficiencies and professionalism. Course work includes specialty/artisanal breads, desserts/pastries, chocolate and confections production, decorative work, high-volume production and food marketing.

Graduates should qualify for entry-level positions, such as baker, pastry cook, cake decorator, pastry or bakery assistant, and assistant pastry chef. An American Culinary Federation certification may be available to graduates.

For specific information about potential positions and wages in Baking and Pastry Arts employment, visit the Central Piedmont Career Coach website.

## Baking and Pastry Arts (A55130)

### Degree Awarded

The Associate in Applied Science Degree – Baking and Pastry Arts is awarded by the college upon completion of this program.

## Admissions

- Complete an admissions application to Central Piedmont.
- Submit an official high school diploma as well as college transcripts to the Admission/Records Center.
- Take placement tests in English, reading and mathematics.
- All needed developmental studies courses must be completed prior to beginning CUL, HRM, and BPA prefix courses.
- Consult with an academic advisor regarding course placement.
- Register for required General Education courses.
- Contact the Baking and Pastry Arts Program Chair, Tanya Beauvais at tanya.beauvais@cpcc.edu or 704.330.4642 to register for the next information session.
- Attend a Baking and Pastry Arts program information session.
- Many courses have prerequisites or co-requisites; check the Courses section for details.
- Students must have a BPA program code **A55130**.

## Notes

- Currently, there are more applications for admittance than space available in the Baking and Pastry Arts Program. Criteria for program admission include scores on standardized tests, interview and/or attendance to orientation, completion of general education requirements, past academic performance with a minimum GPA of 2.0, and experience in the field of interest.
- Students must meet admission requirements, attend an information session and complete an advising appointment with Baking and Pastry Arts faculty prior to registering for courses.
- All major requirements and other major requirements are taught via lockstep format at the Central Piedmont Harris Campus by BPA program instructors.
- Progression in this program is dependent upon a score of “C” or better in all courses with CUL, HRM and BPA prefixes.
- All CUL and BPA lab classes require student accident medical insurance.

## Contact Information

The Baking and Pastry Arts Program is located exclusively at the Harris Campus.

The Baking and Pastry Arts Program is a department within the Hospitality Education Division. For more information, call 704.330.4642 or visit the Baking and Pastry Arts website.

### General Education Requirements

ENG 111	Writing and Inquiry	3.0
Select 3 credits of the following:		3.0
ENG 112	Writing and Research in the Disciplines	
ENG 113	Literature-Based Research	
ENG 114	Professional Research & Reporting	
Select 3 credits of the following:		3.0
COM 110	Introduction to Communication	
COM 231	Public Speaking	
Select 3 credits of the following:		3.0
ART 111	Art Appreciation	
ART 114	Art History Survey I	
ART 115	Art History Survey II	

## Programs of Study

HUM 120	Cultural Studies	
HUM 130	Myth in Human Culture	
MUS 110	Music Appreciation	
MUS 112	Introduction to Jazz	
PHI 215	Philosophical Issues	
PHI 240	Introduction to Ethics	
REL 110	World Religions	
Select 3 credits of the following		3.0
ECO 251	Principles of Microeconomics	
ECO 252	Principles of Macroeconomics	
HIS 111	World Civilizations I	
HIS 112	World Civilizations II	
HIS 131	American History I	
HIS 132	American History II	
POL 120	American Government	
PSY 150	General Psychology	
SOC 210	Introduction to Sociology	
Select 3 credits of the following:		3.0
MAT 110	Mathematical Measurement and Literacy	
MAT 121	Algebra/Trigonometry I	
MAT 143	Quantitative Literacy	
MAT 152	Statistical Methods I	
MAT 171	Precalculus Algebra	
MAT 172	Precalculus Trigonometry	
<b>Major Requirements</b>		
BPA 130	European Cakes and Tortes	3.0
BPA 150	Artisan & Specialty Bread	4.0
BPA 165	Hot and Cold Desserts	3.0
BPA 210	Cake Design and Decorating	3.0
BPA 220	Confection Artistry	4.0
BPA 230	Chocolate Artistry	3.0
BPA 240	Plated Desserts	3.0
BPA 250	Dessert and Bread Production	5.0
BPA 260	Pastry and Baking Marketing	3.0
CUL 110	Sanitation and Safety	2.0
CUL 111	Success in Hospitality Studies	1.0
CUL 112	Nutrition for Foodservice	3.0
CUL 142	Fundamentals of Food	5.0
CUL 150	Food Science	2.0
CUL 160	Baking I	3.0
CUL 160A	Baking I Lab	1.0
HRM 220	Cost Control-Food and Beverage	3.0
HRM 245	Human Resource Management-Hospitality	3.0
WBL 112	Work-Based Learning I	2.0
Total Credits		74

## No diplomas are offered in Baking and Pastry Arts.

## Baking and Pastry Arts Certificates (C55130)

- Baking and Pastry Arts Certificate with a Specialization in Cake Artistry (C55130-C1) (p. 126)
- Baking and Pastry Arts Certificate Specialization in Chocolate and Confection Production (C55130-C4) (p. 127)
- Baking and Pastry Arts Certificate Specialization in Artisan Bread (C55130-C5) (p. 127)
- Baking and Pastry Arts Certificate Specialization in European Desserts and Cakes (C55130-C6) (p. 127)
- Baking and Pastry Arts Certificate Specialization in Plated Desserts Artistry (C55130-C7) (p. 127)

At this time, certificates earned in the Baking and Pastry Arts Program (A55130) are awarded by the college upon successful completion of the required courses to students currently enrolled in the degree program.

Certificates are stackable and can be applied toward the Baking and Pastry Arts Degree Program.

## Admissions

- Complete an admissions application to Central Piedmont.
- Submit an official high school diploma as well as college transcripts to the Admission/Records Center.
- Take placement tests in English, reading, and mathematics.
- All needed developmental studies courses must be completed prior to beginning CUL, HRM and BPA prefix courses.
- Consult with an academic advisor regarding course placement.
- Contact the Baking and Pastry Arts Program Chair, Tanya Beauvais at [tanya.beauvais@cpcc.edu](mailto:tanya.beauvais@cpcc.edu) or 704.330.4642 to register for the next information session.
- Attend a Baking and Pastry Arts program information session.
- Many courses have prerequisites or co-requisites; check the Courses section for details.
- Students must have a BPA program certificate code as listed above.

## Notes

- Currently, there are more applications for admittance than space available in the Baking and Pastry Arts Program. Criteria for program admission include scores on standardized tests, interview and/or attendance to orientation, completion of general education requirements, past academic performance with a minimum GPA of 2.0, and experience in the field of interest.
- Students must meet admission requirements, attend an information session and complete an advising appointment with Baking and Pastry Arts faculty prior to registering for courses.
- Progression in this program is dependent upon a score of "C" or better in all courses with CUL, HRM and BPA prefixes.
- All CUL and BPA lab classes require student accident medical insurance.

## Contact Information

The Baking and Pastry Arts program is a department within the Hospitality Education Division. For more information, call 704.330.4642 or visit the Baking and Pastry Arts website.

## Baking and Pastry Arts Certificate with a Specialization in Cake Artistry (C55130-C1)

This certificate is designed to prepare students who would like to be employed as a baking professional, cake decorator, or those with some baking experience who want to further their knowledge in this specialized area. This certificate emphasizes American and European cake construction and artistry.

### Major Requirements

CUL 110	Sanitation and Safety	2.0
CUL 111	Success in Hospitality Studies	1.0
CUL 160	Baking I	3.0
BPA 130	European Cakes and Tortes	3.0
BPA 210	Cake Design and Decorating	3.0
Total Credits		12

## Baking and Pastry Arts Certificate Specialization in Chocolate and Confection Production (C55130-C4)

### Major Requirements

CUL 110	Sanitation and Safety	2.0
CUL 111	Success in Hospitality Studies	1.0
BPA 165	Hot and Cold Desserts	3.0
BPA 230	Chocolate Artistry	3.0
BPA 220	Confection Artistry	4.0
Total Credits		13

## Baking and Pastry Arts Certificate Specialization in Artisan Bread (C55130-C5)

### Major Requirements

CUL 110	Sanitation and Safety	2.0
CUL 111	Success in Hospitality Studies	1.0
CUL 150	Food Science	2.0
CUL 160	Baking I	3.0
BPA 150	Artisan & Specialty Bread	4.0
Total Credits		12

## Baking and Pastry Arts Certificate Specialization in European Desserts and Cakes (C55130-C6)

### Major Requirements

CUL 110	Sanitation and Safety	2.0
CUL 111	Success in Hospitality Studies	1.0
CUL 160	Baking I	3.0
BPA 165	Hot and Cold Desserts	3.0
BPA 130	European Cakes and Tortes	3.0
Total Credits		12

## Baking and Pastry Arts Certificate Specialization in Plated Dessert Artistry (C55130-C7)

CUL 110	Sanitation and Safety	2.0
CUL 111	Success in Hospitality Studies	1.0
CUL 160	Baking I	3.0

BPA 165	Hot and Cold Desserts	3.0
BPA 240	Plated Desserts	3.0

## Basic Law Enforcement Training

Basic Law Enforcement Training is a curriculum course offered at most community colleges, commonly referred to as a Police Academy. Basic Law Enforcement Training (BLET) is designed to give students essential skills required for entry-level employment as law enforcement officers with state, county, or municipal governments, or with private enterprise.

This program utilizes State commission-mandated topics and methods of instruction. General subjects include, but are not limited to:

- criminal, juvenile, civil, traffic and alcoholic beverage laws
- physical training
- investigative, patrol, custody and court procedures
- emergency responses
- ethics and community relations

The program consists of 640 mandated hours and meets for approximately 16 weeks, Monday through Friday from 7 a.m. until 6 p.m.

**Note:** Central Piedmont has increased the hours in some topical areas of Basic Law Enforcement Training courses beyond the minimum required by the North Carolina Criminal Justice Training and Standards Commission.

Students successfully completing Basic Law Enforcement Training, accredited by the North Carolina Criminal Justice Education and Training Standards Commission and adopted by the North Carolina Sheriff's Education and Training Standards Commission, are eligible to receive up to 24 credit hours toward the Associate in Applied Science degree in Criminal Justice Technology in these courses:

CJC 120 Interview/Interrogations - 2.0 credits,  
 CJC 121 Law Enforcement Operations - 3.0 credits  
 CJC 131 Criminal Law - 3.0 credits  
 CJC 132 Court Procedure and Evidence - 3.0 credits  
 CJC 221 Investigative Principles - 4.0 credits  
 CJC 231 Constitutional Law - 3.0 credits  
 CJC 232 Civil Liability - 3.0 credits.

In order to successfully complete Basic Law Enforcement Training, students must complete the Criminal Justice Education and Training Standards Commission's comprehensive certification examination. Employment with criminal justice agencies is subject to specific agency criteria; therefore, completion of the program or a degree, alone does not guarantee eligibility for employment.

To receive a certificate, students must successfully complete and pass all units of study, including certification examinations mandated by the North Carolina Criminal Justice Education and Training Standards Commission and the North Carolina Sheriffs' Education and Training Standards Commission.

**See Admission Requirements, Course Requirement and further information under Certificates.**

For specific information about potential positions and wages in Basic Law Enforcement Training employment, visit the Central Piedmont Career Coach website.



## No degrees are offered in Basic Law Enforcement.

## No diplomas are offered in Basic Law Enforcement.

## Basic Law Enforcement Training (C55120)

## Basic Law Enforcement Certificate (C55120)

### Program Location

This program is located on the Merancas Campus of Central Piedmont in Huntersville, N.C. in the Claudia Watkins Belk Center for Justice.

### Admission Requirements

1. Be a citizen of the United States
2. Be at least 20 1/2 years of age
3. Hold a valid North Carolina Drivers license
4. Be a high school graduate or have passed GED test. Note: High School diplomas earned through correspondence enrollment do not meet this requirement. 12 NCAC 09B .0106
5. Score 10th grade level or higher on the Accuplacer Reading test prior to enrollment
6. Be of good moral character pursuant to G.S. 17C-10.
7. Have no felony commission or conviction in a court, Class B misdemeanor, or 4 or more Class A misdemeanors in accordance with the rules established by the North Carolina Administrative Code, including all out of state and military charges
8. Be examined and certified by a NC licensed physician as being capable of performing the duties of a Law Enforcement Officer.
9. Have a certified criminal record check from the "Clerk of the Courts" office in each County/State of residence since the age of 16 years old, including any time in which the candidate was a member of the US military (Military records).

Prior to enrollment, each candidate must call to set up a preliminary interview with the Director of the BLET program. The purpose of the interview is to determine the eligibility of the candidate to participate in the program. Candidates must have a clean criminal record. No charges, convictions, or proof of a commission of any criminal offenses, except minor traffic offenses. Enrollment packets are issued only after the BLET Director determines the eligibility of candidates.

### Major Requirements

CJC 100	Basic Law Enforcement Training	20.0
Total Credits		20

### For further information

This program is part of the Public Safety Division. To learn more about the program, or to schedule a preliminary interview contact:

**Sgt. Stanley T. Moore**, Director  
 Basic Law Enforcement Training  
 704.330.4169 or email at stanley.moore@cpcc.edu  
 Available weekdays from 8 a.m.- 4:30 p.m. Office hours by appointment only.

**Markitta Garner**, BLET Qualified Assistant

Basic Law Enforcement Training  
 704.330.4110 or email at markitta.garner@cpcc.edu  
 (latrease.quigley@cpcc.edu)

## Biomedical Equipment Technology

A course of study that prepares the students to use basic engineering principles and technical skills to install, operate, troubleshoot, and repair sophisticated devices and instrumentation used in the health care delivery system. Includes instruction in instrument calibration, design and installation testing, system safety and maintenance procedures, procurement and installation procedures, and report preparation. With an Associate in Applied Science (A.A.S.) degree and two years of experience, students should be able to become a certified Biomedical Equipment Technician.

Developing information on the Biomedical Equipment Technology program may be found on the Engineering Technologies website.

For specific information about potential positions and wages in Biomedical Equipment employment, visit the Central Piedmont Career Coach website.

## Biomedical Equipment Technology (A50100)

### Degree Awarded

The Associate in Applied Science Degree - Biomedical Equipment Technology is awarded by the college upon completion.

### Admissions

- A high school diploma or equivalent is required. High school students preparing for an Engineering Technology program should complete courses in algebra, geometry and advanced mathematics. Skills and proficiencies should be developed in writing, computer literacy and science.
- Central Piedmont placement tests are required in English and mathematics. Advancement Studies in mathematics and English courses are available for students to build basic skills and knowledge. A counseling/orientation appointment follows placement testing.
- Many courses require prerequisites or co-requisites; check the Courses section for details.

### Contact Information

The Biomedical Equipment Technology program is in the Engineering Technology Division. For additional information, visit the Engineering Technologies Division website or call the division office at 704.330.6860.

### General Education Requirements

ENG 111	Writing and Inquiry	3.0
COM 110	Introduction to Communication	3.0
Select 1 of the following:		3.0
ENG 112	Writing and Research in the Disciplines	3.0
	or ENG 113 Literature-Based Research	
	or ENG 114 Professional Research & Reporting	
Select 1 of the following:		3.0
MAT 121	Algebra/Trigonometry I	3.0
	or MAT 171 Precalculus Algebra	

Select 1 of the following: 3.0

- PSY 150 General Psychology
- or SOC 210 Introduction to Sociology

Select 1 of the following: 3.0

- ART 111 Art Appreciation
- or ART 114 Art History Survey I
- or ART 115 Art History Survey II
- or HUM 120 Cultural Studies
- or HUM 130 Myth in Human Culture
- or MUS 110 Music Appreciation
- or MUS 112 Introduction to Jazz
- or PHI 215 Philosophical Issues
- or PHI 240 Introduction to Ethics
- or REL 110 World Religions

**Major Requirements**

BMT 111	Introduction to Biomedical Field	2.0
BMT 112	Hospital Safety Standards	3.0
BMT 120	Biomedical Anatomy & Physiology	3.0
BMT 212	BMET Instrumentation I	6.0
BMT 213	BMET Instrumentation II	3.0
BMT 223	Imaging Techniques/Laser Fundamentals	4.0
BMT 225	Biomedical Trouble Shooting	3.0
ELC 131	Circuit Analysis I	4.0
ELN 131	Analog Electronics I	4.0
ELN 133	Digital Electronics	4.0
NET 125	Introduction to Networks	3.0
NET 126	Routing Basics	3.0
SEC 110	Security Concepts	3.0
WBL 122	Work-Based Learning II	2.0
WBL 125	Work-Based Learning Seminar II	1.0
Select 6 credits from the following:		6.0
ATR 112	Introduction to Automation	
CTI 130	Operating Systems and Device Foundation	
ELC 213	Instrumentation	
ELN 232	Introduction to Microprocessors	
ELN 233	Microprocessor Systems	
ELN 260	Prog Logic Controllers	
NET 175	Wireless Technology	
NET 225	Routing & Switching I	
NET 226	Routing and Switching II	
PCI 170	DAQ and Control	
PCI 173	Programmable Systems	
SEC 150	Secure Communications	
SEC 160	Security Administration I	
**WBL 111 and WBL 115 count as 1 course**		
WBL 111	Work-Based Learning I	
& WBL 115	and Work-Based Learning Seminar I	
**WBL 112 and WBL 115 count as 1 course**		
WBL 112	Work-Based Learning I	
& WBL 115	and Work-Based Learning Seminar I	

Total Credits 72

**No diplomas are offered in Biomedical Equipment Technology.**

**Biomedical Equipment Technology Certificate (C50100)**

**Biomedical Equipment Technology Certificate Specialization in Biomedical Equipment Technology Pathway (C50100-C1)**

Major Requirements

ELC 131	Circuit Analysis I	4.0
MAT 121	Algebra/Trigonometry I	3.0
BMT 111	Introduction to Biomedical Field	2.0
BMT 120	Biomedical Anatomy & Physiology	3.0

Total Credits 12

**Broadcasting and Production Technology**

An Associate in Applied Science degree in Broadcasting & Production Technology (BPT) at Central Piedmont gives skilled, competent media students opportunities to work in a variety of media-related venues and services. The BPT curriculum is designed to provide competency-based knowledge, scientific/artistic principles, and hands-on fundamentals associated with the digital journalism and media industry.

The curriculum prepares students for entry-level employment in production support and selected technical areas of film, video, broadcasting and other media production. Technical electives provide a number of options for students, depending upon their goals and interests within media production, such as the creation, manipulation and animation of digital images and, for those who are entrepreneurially inclined, the creation of their own media business. Students in the BPT program also follow professional standards that include a positive collaborative approach when working with classmates, faculty and staff, and community members on tasks and projects, including punctuality, meeting deadlines and courteous interactions as well as academic integrity (see Central Piedmont's Student Code of Conduct policy).

For specific information about potential positions and wages in Broadcast and Production employment, visit the Central Piedmont Career Coach website.

**Broadcasting and Production Technology (30120)**

**Degree Awarded**

An Associate in Applied Science Degree in Broadcasting & Production Technology (BPT) is awarded upon completion of this program.

**Admissions**

- A high school diploma or equivalent is required.
- Placement tests determine placement in English (ENG) and mathematics (MAT).
- Some courses have prerequisites or co-requisites; check the Courses section for details.

**Contact Information**

The Broadcasting and Production Technology Program is in the Digital Media, Journalism and Communication Division. For more information, call 704.330.2722 extension 3134.

**General Education Requirements**

ENG 111	Writing and Inquiry	3.0
ENG 112	Writing and Research in the Disciplines	3.0
COM 231	Public Speaking	3.0
PSY 150	General Psychology	3.0
Select 3 credits from the following:		3.0
MAT 110	Mathematical Measurement and Literacy	
MAT 121	Algebra/Trigonometry I	
MAT 143	Quantitative Literacy	
MAT 152	Statistical Methods I	
MAT 171	Precalculus Algebra	

Select 3 credits from the following:		3.0
ART 111	Art Appreciation	
ART 114	Art History Survey I	
ART 115	Art History Survey II	
HUM 120	Cultural Studies	
HUM 130	Myth in Human Culture	
MUS 110	Music Appreciation	
MUS 112	Introduction to Jazz	
PHI 215	Philosophical Issues	
PHI 240	Introduction to Ethics	
REL 110	World Religions	

**Major Requirements**

BPT 110	Introduction to Broadcasting	3.0
BPT 111	Broadcast Law & Ethics	3.0
BPT 112	Broadcast Writing	4.0
BPT 113	Broadcast Sales	3.0
BPT 121	Broadcast Speech I	3.0
CIS 110	Introduction to Computers	3.0
COM 150	Introduction to Mass Communication	3.0
DME 110	Introduction to Digital Media	3.0
FVP 220	Editing I	3.0
FVP 250	Production Specialties I	3.0
or ART 266	Videography I	
FVP 251	Production Specialties II	3.0
or ART 267	Videography II	
JOU 110	Introduction to Journalism	3.0
JOU 216	Writing for Mass Media	3.0
Select 6 credits from the following:		6.0
ART 171	Computer Art I	
ART 261	Photography I	
ART 260	Photography Appreciation	
ART 265	Digital Photography II	
ART 264	Digital Photography I	
BPT 231	Video/TV Production I	
DRA 135	Acting for the Camera I	
FVP 114	Camera & Lighting I	
FVP 115	Camera & Lighting II	

HUM 160	Introduction to Film	
JOU 217	Feature/Editorial Writing	
MKT 232	Social Media Marketing	
BUS 139	Entrepreneurship I	
SGD 111	Introduction to Simulation and Game Development	
SGD 162	Simulation and Game 3-D Animation	
WBL 111	Work-Based Learning I	
WBL 112	Work-Based Learning I	
WEB 110	Internet/Web Fundamentals	
WEB 120	Introduction to Internet Multimedia	
FVP 116	Sound Operations	
Total Credits		64

**No diplomas are offered in Broadcasting and Production Technology.**

**Broadcasting and Production Technology Certificate Specialization in Foundations of Production Technology (C30120-C1)**

**Major Requirements**

CIS 110	Introduction to Computers	3.0
FVP 114	Camera & Lighting I	3.0
FVP 220	Editing I	3.0
ART 266	Videography I	3.0
ART 267	Videography II	3.0
FVP 116	Sound Operations	3.0
Total Credits		18

**Business Administration**

The Business Administration curriculum is designed to introduce students to the various aspects of the free enterprise system. Students are provided with a fundamental knowledge of business functions, processes and an understanding of business organizations in today's global economy. Course work includes business concepts such as accounting, business law, economics, management, global business and marketing. Skills related to the application of these concepts are developed through the study of computer applications, communication, team building and decision-making. Through these skills, students gain a sound business education base for lifelong learning. Graduates are prepared for employment opportunities in government agencies, financial institutions and large to small business or industry.

For more information, call the Business Administration Division office at 704.330.4228.

For specific information about potential positions and wages in Business Administration employment, visit the Central Piedmont Career Coach website.

**Business Administration (A25120)**

**Degree Awarded**

The Associate in Applied Science Degree – Business Administration is awarded by the college upon completion of this program.

The Business Administration degree is available in four tracks:

- Business Administration (A25120B) (p. 133)
- Business Administration - Global Business (A25120G) (p. 133)
- Business Administration - Human Resources Management (A25120H) (p. 133)
- Business Administration - Marketing (A25120M) (p. 133)

## Admissions

- A high school diploma or equivalent is required.
- Submit a completed admissions application to Central Piedmont.
- Submit high school transcripts and any former college transcripts to Admissions, Records & Registration.
- Request all former college transcripts be evaluated for transfer credit to Central Piedmont. Business and Accounting courses taken at Central Piedmont or transferred in from another institution over 10 years old will not be counted towards a degree or certificate unless approved by the Business and Accounting program chairs.
- Central Piedmont placement tests are required in reading comprehension and algebra. Developmental courses in English and mathematics are available for students to build basic skills and knowledge. All necessary developmental courses must be completed prior to beginning courses with the following prefixes: ACC, BUS, ECM, INT, LOG and MKT.
- Consult with an advisement counselor and attend an orientation session following placement testing.
- Consult with the program Chair regarding program sequence of courses and course registration. Call the Business and Accounting Division at 704.330.4228 for an appointment.
- Many courses have prerequisites or co-requisites; check the Courses section for details.

## Method of Study

Business Administration Degree courses are either web-enhanced or offered fully online. Testing is available at one of the Central Piedmont campuses or online. Check with the instructor or the Business and Accounting Division Office at 704.330.6595 for details.

## Transferring to Senior Institutions

In order to transfer courses more effectively, students intending to transfer from Central Piedmont to a senior institution should check with the four-year school(s) of their choice for general education, program and GPA requirements for transfer. Information on transfer institutions is available through the Business and Accounting Division Office.

## For More Information

The Business Administration program are in the Business and Accounting Division. For information, call the Business and Accounting Division office at 704.330.4228.

## Business Administration (A25120B)

### General Education Requirements

ENG 111	Writing and Inquiry	3.0
Select 3 credits from the following courses:		3.0
ENG 112	Writing and Research in the Disciplines	
ENG 113	Literature-Based Research	
ENG 114	Professional Research & Reporting	
COM 110	Introduction to Communication	3.0
or COM 231	Public Speaking	

Select 3 credits from the following courses:		3.0
MAT 143	Quantitative Literacy	
MAT 152	Statistical Methods I	
MAT 171	Precalculus Algebra	

Select 3 credits from the following courses:		3.0
ART 111	Art Appreciation	
ART 114	Art History Survey I	
ART 115	Art History Survey II	
HUM 120	Cultural Studies	
HUM 130	Myth in Human Culture	
MUS 110	Music Appreciation	
MUS 112	Introduction to Jazz	
PHI 215	Philosophical Issues	
PHI 240	Introduction to Ethics	
REL 110	World Religions	

Select 3 credits from the following courses:		3.0
ECO 252	Principles of Macroeconomics	
HIS 111	World Civilizations I	
HIS 112	World Civilizations II	
HIS 131	American History I	
HIS 132	American History II	
POL 120	American Government	
PSY 150	General Psychology	
SOC 210	Introduction to Sociology	

### Major Requirements

BUS 110	Introduction to Business	3.0
BUS 115	Business Law I	3.0
BUS 137	Principles of Management	3.0
MKT 120	Principles of Marketing	3.0
ACC 120	Principles of Financial Accounting	4.0
ECO 251	Principles of Microeconomics	3.0
CIS 110	Introduction to Computers	3.0
BUS 135	Principles of Supervision	3.0
BUS 139	Entrepreneurship I	3.0
BUS 153	Human Resource Management	3.0
BUS 255	Organizational Behavior in Business	3.0
INT 110	International Business	3.0
BUS 230	Small Business Management	3.0
or ECM 210	Introduction to E-Commerce	

### Technical Electives

Select 9 credits from the following:		9.0
ACC 121	Principles of Managerial Accounting	
ACC 150	Accounting Software Applications	
BAF 121	Economics for Bankers	
BUS 112	SIFE Business Development	
BUS 116	Business Law II	
BUS 125	Personal Finance	
BUS 152	Human Relations	
BUS 217	Employment Law and Regulations	
BUS 234	Training and Development	
BUS 240	Business Ethics	
BUS 253	Leadership and Management Skills	



Programs of Study

BUS 260	Business Communication
ECO 252	Principles of Macroeconomics
INT 115	Global Communication
INT 180	Travel Study Abroad
LOG 110	Introduction to Logistics
LOG 125	Transportation Logistics
MKT 223	Customer Service
MKT 224	International Marketing
MKT 232	Social Media Marketing
OMT 110	Intro to Operations Mgmt
SST 110	Introduction to Sustainability
SST 210	Issues in Sustainability
WBL 112	Work-Based Learning I
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Total Credits	67

**Business Administration - Global Business Track (A25120G)**

The Global Business curriculum prepares individuals for positions in global business through studies in accounting, business, and specialized courses in global marketing, law, economics, and trade. Students are expected to demonstrate language skills, knowledge of geographic, political, and cultural differences. A degree in global business is available upon the completion of 68 credit hours of specified, required courses. Certificates in global business and global operations also are available upon completion of 18 credit hours (each) of specified, required courses. For more information, check the Business and Accounting Division website or call the division office at 704.330.4228.

**General Education Requirements**

ENG 111	Writing and Inquiry	3.0
Select 3 credits of the following:		3.0
ENG 112	Writing and Research in the Disciplines	
ENG 113	Literature-Based Research	
ENG 114	Professional Research & Reporting	
Select 3 credits from the following:		3.0
COM 110	Introduction to Communication	
COM 231	Public Speaking	
Select 3 credits from the following:		3.0
MAT 143	Quantitative Literacy	
MAT 152	Statistical Methods I	
MAT 171	Precalculus Algebra	
Select 3 credits from the following:		3.0
ART 111	Art Appreciation	
ART 114	Art History Survey I	
ART 115	Art History Survey II	
HUM 120	Cultural Studies	
HUM 130	Myth in Human Culture	
MUS 110	Music Appreciation	
MUS 112	Introduction to Jazz	
PHI 215	Philosophical Issues	
PHI 240	Introduction to Ethics	
REL 110	World Religions	
Select 3 credits from the following:		3.0
ECO 252	Principles of Macroeconomics	

HIS 111	World Civilizations I	
HIS 112	World Civilizations II	
HIS 131	American History I	
HIS 132	American History II	
POL 120	American Government	
PSY 150	General Psychology	
SOC 210	Introduction to Sociology	
<b>Major Requirements</b>		
ACC 120	Principles of Financial Accounting	4.0
ACC 270	International Accounting	3.0
BUS 110	Introduction to Business	3.0
BUS 115	Business Law I	3.0
BUS 137	Principles of Management	3.0
CIS 110	Introduction to Computers	3.0
ECO 151	Survey of Economics	3.0
or ECO 251	Principles of Microeconomics	
INT 110	International Business	3.0
INT 210	International Trade	3.0
INT 220	International Economics	3.0
INT 230	International Law	3.0
LOG 110	Introduction to Logistics	3.0
MKT 120	Principles of Marketing	3.0
MKT 224	International Marketing	3.0
or LOG 125	Transportation Logistics	
Select 4 credits from the following:		4.0
SPA 111	Elementary Spanish I	
& SPA 181	and Spanish Lab 1	
FRE 111	Elementary French I	
& FRE 181	and French Lab 1	
GER 111	Elementary German I	
& GER 181	and German Lab 1	
<b>Technical Electives</b>		
Select 3 credits from the following:		3.0
ACC 121	Principles of Managerial Accounting	
BUS 139	Entrepreneurship I	
BUS 152	Human Relations	
BUS 153	Human Resource Management	
BUS 217	Employment Law and Regulations	
BUS 230	Small Business Management	
BUS 234	Training and Development	
BUS 240	Business Ethics	
BUS 253	Leadership and Management Skills	
ECO 252	Principles of Macroeconomics	
INT 115	Global Communication	
INT 180	Travel Study Abroad	
MKT 232	Social Media Marketing	
OMT 110	Intro to Operations Mgmt	
WBL 111	Work-Based Learning I	
WBL 112	Work-Based Learning I	
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Total Credits		68

### Business Administration - Human Resources Management Track (A25120H)

The Human Resources Management curriculum is designed to meet the demands of business and service agencies. The objective is the development of generalists and specialists in the administration, training and management of human resources. Course work includes studies in management, interviewing, placement, needs assessment, planning, legal issues, compensation and benefits and training techniques. Also included are topics such as people skills, learning approaches, skill building and development of instructional and training materials. Graduates from this program will have a sound business educational base for life-long learning. Students will be prepared for employment opportunities in personnel, training and other human resource development areas. For more information, call the Business and Accounting Division office at 704.330.6595.

#### General Education Requirements

ENG 111	Writing and Inquiry	3.0
Select 3 credits from the following:		3.0
ENG 112	Writing and Research in the Disciplines	
ENG 113	Literature-Based Research	
ENG 114	Professional Research & Reporting	
COM 110	Introduction to Communication	3.0
or COM 231	Public Speaking	
Select 3 credits from the following:		3.0
MAT 143	Quantitative Literacy	
MAT 152	Statistical Methods I	
MAT 171	Precalculus Algebra	
Select 3 credits from the following:		3.0
ART 111	Art Appreciation	
ART 114	Art History Survey I	
ART 115	Art History Survey II	
HUM 120	Cultural Studies	
HUM 130	Myth in Human Culture	
MUS 110	Music Appreciation	
MUS 112	Introduction to Jazz	
PHI 215	Philosophical Issues	
PHI 240	Introduction to Ethics	
REL 110	World Religions	
Select 3 credits from the following:		3.0
ECO 252	Principles of Macroeconomics	
HIS 111	World Civilizations I	
HIS 112	World Civilizations II	
HIS 131	American History I	
HIS 132	American History II	
POL 120	American Government	
PSY 150	General Psychology	
SOC 210	Introduction to Sociology	

#### Major Requirements

BUS 110	Introduction to Business	3.0
BUS 115	Business Law I	3.0
BUS 137	Principles of Management	3.0
MKT 120	Principles of Marketing	3.0
ACC 120	Principles of Financial Accounting	4.0

ECO 251	Principles of Microeconomics	3.0
CIS 110	Introduction to Computers	3.0
BUS 217	Employment Law and Regulations	3.0
BUS 234	Training and Development	3.0
BUS 256	Recruiting, Selection & Personnel Planning	3.0
BUS 258	Compensation and Benefits	3.0
BUS 259	Human Resource Management Applications	3.0
BUS 153	Human Resource Management	3.0
BUS 255	Organizational Behavior in Business	3.0
Select 6 credits from the following:		6.0
ACC 121	Principles of Managerial Accounting	
INT 110	International Business	
BUS 135	Principles of Supervision	
BUS 116	Business Law II	
WBL 112	Work-Based Learning I	
BUS 152	Human Relations	
BUS 139	Entrepreneurship I	
BUS 240	Business Ethics	
INT 115	Global Communication	
MKT 232	Social Media Marketing	
BUS 253	Leadership and Management Skills	
Total Credits		67

### Business Administration - Marketing Track (A25120M)

The Marketing and Retailing curriculum is designed to provide students with fundamental skills in marketing and retailing. Course work includes marketing, retailing, merchandising, selling, advertising, computer technology and management. Graduates should qualify for marketing positions within marketing, retailing and service organizations.

#### General Education Requirements

ENG 111	Writing and Inquiry	3.0
COM 110	Introduction to Communication	3.0
or COM 231	Public Speaking	
Select 3 credits from the following:		3.0
ENG 112	Writing and Research in the Disciplines	
ENG 113	Literature-Based Research	
ENG 114	Professional Research & Reporting	
Select 3 credits from the following:		3.0
MAT 143	Quantitative Literacy	
MAT 152	Statistical Methods I	
MAT 171	Precalculus Algebra	
Select 3 credits from the following:		3.0
REL 110	World Religions	
PHI 240	Introduction to Ethics	
HUM 120	Cultural Studies	
ART 111	Art Appreciation	
ART 114	Art History Survey I	
ART 115	Art History Survey II	
HUM 130	Myth in Human Culture	
MUS 110	Music Appreciation	
MUS 112	Introduction to Jazz	

PHI 215	Philosophical Issues	
Select 3 credits from the following:		3.0
ECO 252	Principles of Macroeconomics	
HIS 111	World Civilizations I	
HIS 112	World Civilizations II	
HIS 131	American History I	
HIS 132	American History II	
POL 120	American Government	
PSY 150	General Psychology	
SOC 210	Introduction to Sociology	

**Major Requirements**

MKT 120	Principles of Marketing	3.0
BUS 110	Introduction to Business	3.0
CIS 110	Introduction to Computers	3.0
MKT 123	Fundamentals of Selling	3.0
MKT 220	Advertising and Sales Promotion	3.0
MKT 221	Consumer Behavior	3.0
MKT 224	International Marketing	3.0
MKT 225	Marketing Research	3.0
MKT 232	Social Media Marketing	4.0
MKT 227	Marketing Applications	3.0
BUS 115	Business Law I	3.0
BUS 137	Principles of Management	3.0
ACC 120	Principles of Financial Accounting	4.0
ECO 251	Principles of Microeconomics	3.0
Select 3 credits from the following:		3.0
MKT 121	Retailing	
MKT 229	Special Events Production	
ENT 211	Entertainment Promotion	
Select 3 credits from the following:		3.0
ECM 210	Introduction to E-Commerce	
LOG 110	Introduction to Logistics	
MKT 230	Public Relations	
BUS 112	SIFE Business Development	
BUS 240	Business Ethics	
WBL 112	Work-Based Learning I	
BUS 153	Human Resource Management	
INT 110	International Business	
MKT 228	Service Marketing	
BUS 139	Entrepreneurship I	
MKT 223	Customer Service	
BUS 152	Human Relations	
BUS 234	Training and Development	
INT 115	Global Communication	
BUS 253	Leadership and Management Skills	
BUS 217	Employment Law and Regulations	
MKT 122	Visual Merchandising	
BUS 260	Business Communication	

Total Credits 68

**No diplomas are offered in Business Administration.**

**Business Administration Certificates (C25120)**

- Business Administration Certificate with a Specialization in Business Management (C25120-C1) (p. 134)
- Business Administration Certificate with a Specialization in Entrepreneurship (C25120-C4) (p. 135)
- Business Administration Certificate with a Specialization in Business Operations (C25120-C5) (p. 135)
- Business Administration Certificate with a Specialization in Interpersonal Business Skills (C25120-C6) (p. 135)
- Business Administration Certificate with a Specialization in Business Analytics (C25120-C7) (p. 135)
- Business Administration Certificate with a Specialization in Project Management (C25120-C8) (p. 135)
- Business Administration Certificate with a Specialization in Advanced Project Management (C25120-C9) (p. 135)
- Business Administration Certificate with a Specialization in Human Resources Generalist (C25120-10) (p. 135)
- Business Administration Certificate with a Specialization in Leadership Development (C25120-11) (p. 136)
- Business Administration Certificate with a Specialization in Event Marketing and Promotion (C25120-30) (p. 136)
- Business Administration Certificate with a Specialization in Sales (C25120-31) (p. 136)
- Business Administration Certificate with a Specialization in Customer Service (C25120-32) (p. 136)
- Business Administration Certificate with a Specialization in Marketing (C25120-33) (p. 136)
- Business Administration Certificate with a Specialization in Global Business (C25120-34) (p. 137)
- Business Administration Certificate with a Specialization in Global Operations (C25120-35) (p. 137)

**Business Administration Certificate with a Specialization in Business Management (C25120-C1)**

This certificate is designed to provide students with a concentrated course of study in the field of business management. Upon completion of the six courses, a certificate is awarded by the college. Courses for this certificate may be applied toward the Associate Degree in Business Administration. For more information, call the Business and Accounting Division at 704.330.4228.

**General Education Requirements**

COM 110	Introduction to Communication	3.0
or COM 231	Public Speaking	

**Major Requirements**

BUS 137	Principles of Management	3.0
BUS 110	Introduction to Business	3.0
BUS 153	Human Resource Management	3.0
BUS 255	Organizational Behavior in Business	3.0
Select one course		3.0
MKT 232	Social Media Marketing	
ECM 210	Introduction to E-Commerce	

BUS 230	Small Business Management	
Total Credits		18

### Business Administration Certificate with a Specialization in Entrepreneurship (C25120-C4)

This certificate is designed to provide the student with a concentrated course of study in the field of entrepreneurship and small business start-up and management. Upon completion of the six courses, a certificate is awarded by the college. Courses for this certificate may be applied toward the Associate in Applied Science Degree in Business Administration. For more information, call the Business and Accounting Division at 704.330.4228.

**Major Requirements**

MKT 120	Principles of Marketing	3.0
BUS 110	Introduction to Business	3.0
BUS 139	Entrepreneurship I	3.0
BUS 125	Personal Finance	3.0

**Accounting Elective**

ACC 150	Accounting Software Applications	2.0
or ACC 120	Principles of Financial Accounting	

**Business Elective**

Select one of the following: 3.0

BUS 153	Human Resource Management	
BUS 115	Business Law I	
BUS 255	Organizational Behavior in Business	
INT 110	International Business	
BUS 135	Principles of Supervision	
MKT 232	Social Media Marketing	

Total Credits		17
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### Business Administration Certificate with a Specialization in Business Operations (C25120-C5)

This certificate is designed to provide students with a foundation in business vocabulary in addition to various topics that prepares them for pre-management positions. This certificate may be applied toward the Associate Degree in Business Administration. This certificate also is available to students enrolled in Career & College Promise. For more information, call the Business and Accounting Division at 704.330.4228.

**Major Requirements**

BUS 115	Business Law I	3.0
BUS 137	Principles of Management	3.0
CIS 110	Introduction to Computers	3.0
MKT 120	Principles of Marketing	3.0
BUS 110	Introduction to Business	3.0

Total Credits		15
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### Business Administration Certificate with a Specialization in Interpersonal Business Skills (C25120-C6)

**General Education Requirements**

COM 110	Introduction to Communication	3.0
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**Major Requirements**

CIS 110	Introduction to Computers	3.0
BUS 125	Personal Finance	3.0
BUS 152	Human Relations	3.0
MKT 223	Customer Service	3.0

Total Credits		15
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### Business Administration Certificate with a Specialization in Business Analytics (C25120-C7)

BAS 120	Introduction to Analytics	3.0
BAS 121	Data Visualization	3.0
BAS 150	Introduction to Analytical Programming	3.0
BAS 220	Applied Analytical Programming	3.0
BUS 228	Business Statistics	3.0

Total Credits		15
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### Business Administration Certificate Specialization in Project Management (C25120-C8)

**Major Requirements**

CIS 110	Introduction to Computers	3.0
BUS 110	Introduction to Business	3.0
PMT 110	Introduction to Project Management	3.0
PMT 111	Project Management Assessing Risk	3.0
WBL 112	Work-Based Learning I (General Education Requirements)	2.0

Total Credits		14
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### Business Administration Certificate Specialization in Advanced Project Management (C25120-C9)

**Major Requirements**

BUS 137	Principles of Management	3.0
BUS 234	Training and Development	3.0
or BUS 253	Leadership and Management Skills	
PMT 210	Project Management Issues	3.0
PMT 215	Project Management Leadership	3.0
WBL 122	Work-Based Learning II	2.0

Total Credits		14
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### Human Resources Management Certificates

#### Business Administration Certificate with a Specialization in Human Resources Generalist (C25120-10)

The Human Resource Generalist certificate is designed to meet the educational demands for generalists and specialists currently within the human resource function and those seeking a career in human



resources. Coursework includes studies in human resource management, employment law, workforce planning, selection, training and development, compensation, and benefits. For more information, call the Business and Accounting Division at 704.330.4228.

**Major Requirements**

CIS 110	Introduction to Computers	3.0
BUS 217	Employment Law and Regulations	3.0
BUS 256	Recruiting, Selection & Personnel Planning	3.0
BUS 258	Compensation and Benefits	3.0
BUS 234	Training and Development	3.0
BUS 153	Human Resource Management	3.0
Total Credits		18

**Business Administration Certificate with a Specialization in Leadership Development (C25120-11)**

The Leadership Development certificate is designed to meet educational demands for generalists and specialists currently within the human resource function, as well as managers seeking to gain a knowledge of leadership in today's work environment. Coursework includes studies in human resource management, leadership skills, organizational behavior, and training need assessment. For more information, call the Business and Accounting Division at 704.330.4228.

**Major Requirements**

BUS 153	Human Resource Management	3.0
BUS 234	Training and Development	3.0
BUS 255	Organizational Behavior in Business	3.0
BUS 253	Leadership and Management Skills	3.0
Total Credits		12

**Marketing Certificates**

**Business Administration Certificate with a Specialization in Event Marketing and Promotion (C25120-30)**

This certificate is designed to provide students with a concentrated course of study in the field of event marketing. Upon completion of the five courses, a certificate is awarded by the college. Courses for this certificate may be applied toward the Associate Degree in Applied Science in Business Administration Marketing and Retailing.

For more information, call the Business and Accounting Division 704.330.4228.

**Major Requirements**

MKT 120	Principles of Marketing	3.0
MKT 123	Fundamentals of Selling	3.0
MKT 220	Advertising and Sales Promotion	3.0
MKT 221	Consumer Behavior	3.0

**Technical Electives**

MKT 229 or ENT 211	Special Events Production Entertainment Promotion	2.0
Total Credits		14

**Business Administration Certificate with a Specialization in Sales (C25120-31)**

This certificate is designed to provide students with a concentrated course of study in the field of sales. Upon completion of the five courses, a certificate is awarded by the college. Courses for this certificate may be applied toward the Associate Degree in Business Administration with a concentration in Marketing and Retailing. For more information, call the Business and Accounting Division at 704.330.4228.

**Major Requirements**

BUS 110	Introduction to Business	3.0
CIS 110	Introduction to Computers	3.0
MKT 120	Principles of Marketing	3.0
MKT 123	Fundamentals of Selling	3.0
MKT 221	Consumer Behavior	3.0
Total Credits		15

**Business Administration Certificate with a Specialization in Customer Service (C25120-32)**

This certificate is designed to provide students with a concentrated course of study in the field of customer service. Upon completion of the five courses a certificate is awarded by the college. Courses for this certificate may be applied toward the Associate Degree in Business Administration with a concentration in Marketing and Retailing. For more information, call the Business and Accounting Division office at 704.330.4228.

**Major Requirements**

BUS 110	Introduction to Business	3.0
CIS 110	Introduction to Computers	3.0
MKT 120	Principles of Marketing	3.0
MKT 223	Customer Service	3.0
MKT 221	Consumer Behavior	3.0
Total Credits		15

**Business Administration Certificate with a Specialization in Marketing (C25120-33)**

This certificate is designed to provide students with a concentrated course of study in the field of marketing. Upon completion of the five courses, a certificate is awarded by the college. Courses for this certificate may be applied toward the Associate Degree in Business Administration with a concentration in Marketing and Retailing. For more information, call the Business and Accounting Division at 704.330.4228.

**Major Requirements**

BUS 110	Introduction to Business	3.0
MKT 120	Principles of Marketing	3.0
Take one of the following courses:		2.0-3.0
MKT 121	Retailing	
MKT 229	Special Events Production	
ENT 211	Entertainment Promotion	
MKT 232	Social Media Marketing	4.0
MKT 123	Fundamentals of Selling	3.0
Total Credits		15-16

## Business Administration Certificate with a Specialization in Global Business (C25120-34)

This certificate is designed to provide students with a concentrated course of study in the field of global business, including management, marketing, and economics. Students are expected to demonstrate the knowledge of global marketing, economics, and business. Upon completion of the six required courses, a certificate is awarded by the college. This certificate may be applied toward the Associate in Applied Science degree in Business Administration with a concentration in Global Business. For more information, call the Business and Accounting Division at 704.330.4228 or check the division website at [cpcc.edu/business\\_accounting](http://cpcc.edu/business_accounting)

### Major Requirements

BUS 137	Principles of Management	3.0
CIS 110	Introduction to Computers	3.0
GEO 111 or INT 115	World Regional Geography Global Communication	3.0
INT 110	International Business	3.0
INT 220	International Economics	3.0
MKT 224 or LOG 110	International Marketing Introduction to Logistics	3.0
Total Credits		18

## Business Administration Certificate with a Specialization in Global Operations (C25120-35)

This certificate is designed to provide students with a concentrated course of study in the field of global operations including global trade and logistics. Students are expected to demonstrate the ability to process import/export documentation and knowledge of global economic and business operational practices. Upon completion of the six required courses, a certificate is awarded by the college. This certificate may be applied toward the Associate Degree in Global Business. The Global Operations Certificate is in the Business and Accounting Division.

For more information, call the Business and Accounting Division office at 704.330.4228 or check the division website at [cpcc.edu/business\\_accounting](http://cpcc.edu/business_accounting)

### Major Requirements

INT 110	International Business	3.0
INT 210	International Trade	3.0
LOG 110	Introduction to Logistics	3.0
LOG 125	Transportation Logistics	3.0
OMT 110	Intro to Operations Mgmt	3.0
CIS 110	Introduction to Computers	3.0
Total Credits		18

## Cardiovascular Technology

The Agnes Binder Weisiger Cardiovascular Technology curriculum prepares individuals to develop attributes necessary to perform procedures leading to the diagnosis and treatment of cardiovascular disease.

Course work emphasizes technical and cognitive skills development with application by applying the concepts of echocardiography, exercise stress testing, electrocardiography, cardiac catheterization, blood gases, electrophysiology, cardiovascular anatomy and physiology.

Graduates selecting the non-invasive track (Cardiac Sonography) are eligible to become a Registered Diagnostic Cardiac Sonographer (RDCS) for the Noninvasive Registry through American Registry of Medical Sonography (ARDMS) or a Registered Cardiac Sonography (RCS) through Cardiovascular Credentialing International, Inc. (CCI). Graduates selecting the invasive track (Cardiovascular Invasive Specialist) may be eligible for the Invasive Registry to become a Registered Cardiovascular Invasive Specialist (RCIS) through Cardiovascular Credentialing International, Inc. (CCI).

For specific information about potential positions and wages in Cardiovascular employment, visit the Central Piedmont Career Coach website.

## Cardiovascular Technology (A45170)

### Degree Awarded

The Associate in Applied Science Degree Cardiovascular Technology is awarded by the college upon completion of this program.

### Admissions

- Complete a Central Piedmont admissions application.
- Admission to the Cardiovascular Technology program is competitive. Please note that, in addition to the college application, students also must complete a separate application to apply specifically for the program.
- The program application is available on the Cardiovascular Technology website.
- Students must be selected to enter the program. Upon acceptance and enrollment in the program, students must take all courses as scheduled and sequenced.

### Program Accreditation

Upon the recommendation of the Joint Review Committee on Education in Cardiovascular Technology (JRC-CVT), the Cardiovascular Technology Program is accredited by the Commission on Accreditation of Allied Health Education Programs (CAAHEP) at the associate degree level for two concentrations:

1. Non-Invasive Cardiology (Adult Echocardiography) concentration, and
2. Invasive Cardiology (Invasive Cardiovascular Technology) concentration.

The Commission on Accreditation of Allied Health Education Programs (CAAHEP)

25400 US Highway 19 North  
Suite 158, Clearwater, FL 33763  
[caahep.org](http://caahep.org)  
727-210-2350

### Notes

In addition to tuition and textbooks, costs of this program include the following: scrubs, lab coat, radiation monitoring badge, CVT patch; student picture ID; a physical examination including drug screening test; immunizations such as tetanus toxoid, hepatitis B vaccinations; TB test;

## Programs of Study

blood test (VDRL, rubella titer, etc.), current CPR certification and criminal back-ground check.

All students must provide a certificate of health and accident insurance. In order to participate in clinical education experiences at health care facilities, students may be required to submit results of a NC state or national criminal background check at their own expense. As a condition of program admission, students may be required to verify that they are United States citizens or are otherwise legally authorized residents of the United States.

All students enrolled in the Cardiovascular Technology program take the same Core courses for the first year. Upon admission, applicants select either the Invasive or Noninvasive specialty track. Students enroll in Core courses of their specialty track in the fall term of the second year.

Graduates selecting the non-invasive track are eligible for the Noninvasive Registry to become a Registered Diagnostic Cardiac Sonographer. Graduates selecting the invasive track are eligible for the Invasive Registry to become a Registered Cardiovascular Invasive Specialist. Graduates may be employed in hospitals, clinics and cardiology offices. Registry status, in specialty field, is required for employment.

## Contact Information

The Agnes Binder Weisiger Cardiovascular Technology program is in the Health and Human Services Division. Division offices are located on 3rd floor in the Belk Wing (BL) of the Health Careers Building on Central Campus.

For an admission packet, frequently asked questions and other information, visit the Cardiovascular Technology website, or call the Program Chair at 704.330.6285 or the Admissions Specialist at 704.330.6284.

## Invasive Track

### General Education Requirements

ENG 111	Writing and Inquiry	3.0
PSY 150	General Psychology	3.0
Select 3 credits from the following:		3.0
MAT 143	Quantitative Literacy	
MAT 152	Statistical Methods I	
MAT 171	Precalculus Algebra	
Select 3 credits from the following:		3.0
COM 110	Introduction to Communication	
COM 231	Public Speaking	
Take 3 credits from the following:		3.0
ENG 112	Writing and Research in the Disciplines	
ENG 113	Literature-Based Research	
ENG 114	Professional Research & Reporting	
Select 3 credits of the following:		3.0
ART 111	Art Appreciation	
ART 114	Art History Survey I	
ART 115	Art History Survey II	
HUM 120	Cultural Studies	
HUM 130	Myth in Human Culture	
MUS 110	Music Appreciation	
MUS 112	Introduction to Jazz	
PHI 215	Philosophical Issues	

PHI 240	Introduction to Ethics	
REL 110	World Religions	
<b>Major Requirements</b>		
NCT 134	Cardiovascular Anatomy and Physiology	4.0
ICT 113	Electrocardiography	4.0
ICT 110	Invasive Fundamentals	3.0
ICT 136	Cardiac and Peripheral Vascular Invasive I	6.0
ICT 140	Cardiovascular (CV) Hemodynamics I	2.0
ICT 214	Cardiac and Peripheral Vascular Invasive II	9.0
ICT 218	Invasive Pharmacology	2.0
ICT 234	Cardiac and Peripheral Vascular Invasive III	13.0
ICT 236	Cardiovascular (CV) Hemodynamics II	2.0
Other Major Requirements:		
Select one of the following:		5.0
BIO 163	Basic Anatomy & Physiology	
BIO 168 & BIO 169	Anatomy and Physiology I and Anatomy and Physiology II	
PHY 110	Conceptual Physics	3.0
PHY 110A	Conceptual Physics Lab	1.0
MED 120	Survey of Medical Terminology	2.0
or MED 121	Medical Terminology I	
Total Credits		74

## Non-Invasive Track

### General Education Requirements

ENG 111	Writing and Inquiry	3.0
PSY 150	General Psychology	3.0
Select 3 credits from the following:		3.0
MAT 143	Quantitative Literacy	
MAT 152	Statistical Methods I	
MAT 171	Precalculus Algebra	
Take 3 credits from the following:		3.0
COM 110	Introduction to Communication	
COM 231	Public Speaking	
Take 3 credits from the following:		3.0
ENG 112	Writing and Research in the Disciplines	
ENG 113	Literature-Based Research	
ENG 114	Professional Research & Reporting	
Select 3 credits of the following:		3.0
ART 111	Art Appreciation	
ART 114	Art History Survey I	
ART 115	Art History Survey II	
HUM 120	Cultural Studies	
HUM 130	Myth in Human Culture	
MUS 110	Music Appreciation	
MUS 112	Introduction to Jazz	
PHI 215	Philosophical Issues	
PHI 240	Introduction to Ethics	
REL 110	World Religions	
<b>Major Requirements</b>		
NCT 134	Cardiovascular Anatomy and Physiology	4.0
ICT 113	Electrocardiography	4.0

NCT 110	Echo Fundamentals	3.0
NCT 133	Cardiovascular Ultrasound Principles	3.0
NCT 143	Echocardiography I	6.0
NCT 251	Echocardiography II	8.0
NCT 253	Hemodynamic Echocardiographic Principles	3.0
NCT 273	Echocardiography III	14.0
Select one of the following:		5.0
BIO 163	Basic Anatomy & Physiology	
BIO 168 & BIO 169	Anatomy and Physiology I and Anatomy and Physiology II	
PHY 110	Conceptual Physics	3.0
PHY 110A	Conceptual Physics Lab	1.0
MED 120 or MED 121	Survey of Medical Terminology Medical Terminology I	2.0
Total Credits		74

**No diplomas are offered in Cardiovascular Technology.**

**No certificates are offered in Cardiovascular Technology.**

## Civil Engineering Technology

The Civil Engineering Technology curriculum provides the application of relevant theory of engineering needed by technicians to carry out planning and supervisory tasks in the design and construction of transportation systems, residential and commercial buildings, bridges, dams and water or wastewater treatment systems.

Coursework includes communication and computational skills required to support fields such as materials testing, structures, estimating, project management, hydraulics, environmental technology and surveying. Additional coursework covers the operation of computers and application software, including computer-aided drafting.

Graduates should qualify for technician level jobs with both public and private engineering, construction and surveying agencies.

For specific information about potential positions and wages in Civil Engineering Technology employment, visit the Central Piedmont Career Coach website.

## Civil Engineering Technology (A40140)

### Degree Awarded

The Associate in Applied Science Degree - Civil Engineering Technology is awarded by the college upon completion of this program. This degree is accepted at some colleges and universities towards the first two years of a 2 + 2 bachelor's-level engineering technology program.

### Admissions

- A high school diploma or equivalent is required.
- Central Piedmont placement tests are required in English and mathematics. Developmental classes in mathematics and English courses are available for students to build basic skills and knowledge.
- A counseling/orientation appointment follows placement testing.
- Students should see a faculty advisor before registration.

- Many courses have prerequisites or co-requisites; check the Courses section for details.

## Program Accreditation

The Civil Engineering Technology Program at Central Piedmont is accredited by the Engineering Technology Accreditation Commission (TAC) of the Accreditation Board for Engineering and Technology (ABET).

## Contact Information

Civil Engineering Technology is in the Engineering Technologies Division. For more information, call the Program Chair at 704.330.6614 or visit the Engineering Technologies website.

Note: Students who do not take program-related courses for a one-year period must reenter the program under Catalog requirements in effect at the time of reentry.

### General Education Requirements

ENG 111	Writing and Inquiry	3.0
ENG 114 or ENG 112	Professional Research & Reporting Writing and Research in the Disciplines	3.0
COM 110 or COM 231	Introduction to Communication Public Speaking	3.0
Select 3 credits of the following:		3.0
MAT 121	Algebra/Trigonometry I	
MAT 171	Precalculus Algebra	
Select 3 credits of the following:		3.0
ART 111	Art Appreciation	
ART 114	Art History Survey I	
ART 115	Art History Survey II	
HUM 120	Cultural Studies	
HUM 130	Myth in Human Culture	
MUS 110	Music Appreciation	
MUS 112	Introduction to Jazz	
PHI 215	Philosophical Issues	
PHI 240	Introduction to Ethics	
REL 110	World Religions	
Select 3 credits of the following:		3.0
ECO 251	Principles of Microeconomics	
ECO 252	Principles of Macroeconomics	
HIS 111	World Civilizations I	
HIS 112	World Civilizations II	
HIS 131	American History I	
HIS 132	American History II	
POL 120	American Government	
PSY 150	General Psychology	
SOC 210	Introduction to Sociology	

### Major Requirements

Select one of the following options:		4.0
CEG 111	Introduction to Gis and Gns	
GIS 111 & GIS 112	Introduction to GIS and Introduction to GPS	
CEG 115	Intro to Tech & Sustainability	3.0
CEG 151	Cad for Engineering Technology	3.0
CEG 210	Construction Materials & Methods	3.0



CEG 211	Hydrology & Erosion Control	3.0
CEG 212	Introduction to Environmental Technology	3.0
CEG 235	Project Management and Estimating	3.0
CIV 111	Soils and Foundations	4.0
EGR 250	Statics/Strength of Mater	5.0
SRV 110	Surveying I	4.0
SRV 111	Surveying II	4.0

**Technical Electives**

Select 10 credits from the following: 10.0

CEG 230	Subdivision Planning & Design	
CIV 250	Civil Engineering Technology Project	
ENV 110 &	Environmental Science and Environmental Science Laboratory	
ENV 226	Environmental Law	
GIS 125	CAD for GIS	
GIS 240	Air Photo Interpretation	
GIS 246	Principles of Property Mapping	
LID 111	Low Impact Development Design Principles	
PHY 131 & PHY 132	Physics-Mechanics and Physics-Electricity & Magnetism	
PHY 151 & PHY 152	College Physics I and College Physics II	
SRV 210	Surveying III	
SRV 220	Surveying Law	
SRV 240	Topo/Site Surveying	
SRV 250	Advanced Surveying	
MAT 172	Precalculus Trigonometry	
SRV 260	Field & Office Practices	
MAT 271	Calculus I	
MAT 272	Calculus II	
WBL 112	Work-Based Learning I	
CHM 121 &	Foundations of Chemistry and Foundations of Chemistry Lab	
CHM 131 &	Introduction to Chemistry and Introduction to Chemistry Lab	
CHM 151 & CHM 152	General Chemistry I and General Chemistry II	

Total Credits 67

**No diplomas are offered in Civil Engineering Technology.**

**Civil Engineering Technology Certificates (C40140)**

**Civil Engineering Technology Certificate with a Specialization in Construction Materials Testing (C40140-C1)**

This certificate prepares individuals to enter Materials Testing Careers in the Construction Industry. Course study is intended to provide students with the theoretical background and practical experience to understand materials testing, test materials - primarily soils and concrete, and prepare technical reports. The courses for this certificate may be applied toward the Associate in Applied Science Degree – Civil Engineering Technology.

**Major Requirements**

EGR 250	Statics/Strength of Mater	5.0
CIV 111	Soils and Foundations	4.0
CEG 210	Construction Materials & Methods	3.0
MAT 121	Algebra/Trigonometry I	3.0
Total Credits		15

**Civil Engineering Technology Certificate Specialization in Civil Engineering Technology Pathway (C40140-C3)**

This certificate is intended for high school juniors and seniors enrolled in a Career Technical Education Pathway. Course study is intended to provide students with theoretical background and practical experience to understand the major areas of Civil Engineering Technology: Structures, Materials and Hydraulics. The courses for this certificate may be applied toward the Associate in Applied Science Degree - Civil Engineering Technology.

**General Education Requirements**

MAT 121	Algebra/Trigonometry I	3.0
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**Major Requirements**

SRV 110	Surveying I	4.0
CEG 115	Intro to Tech & Sustainability	3.0
CEG 211	Hydrology & Erosion Control	3.0
Total Credits		13

**Collision Repair and Refinishing Technology**

The Collision Repair and Refinishing Technology curriculum provides training in the use of equipment and materials of the collision repair and refinishing trade. The student studies the construction of the automobile body and techniques of repairing, rebuilding and refinishing.

The course work includes collision repair fundamentals, industry overview and safety. Students will perform hands-on repairs in the areas of non-structural and structural repairs, MIG welding, plastics and adhesives, refinishing and other related areas.

Graduates of the curriculum should qualify for entry-level employment opportunities in the collision repair and refinishing industry. Graduates may find employment with franchised independent garages, or they may become self-employed.

For specific information about potential positions and wages in Collision Repair and Refinishing employment, visit the Central Piedmont Career Coach website.

**Collision Repair and Refinishing Technology (A60130)**

**Diploma Awarded**

An Associate in Applied Science degree in Collision Repair and Refinishing Technology is awarded by the college upon completion of this program.

## Admissions

- Completion of a high school diploma or equivalent is required as the foundation of a career in this area.
- Many courses have prerequisites or co-requisites; check the Courses section for details.

Note: Students must furnish required hand tools, textbooks, respirator and protective clothing. A list of these items can be obtained from an instructor or the program chair. Call the program chair at 704.330.4153 for a list.

## Contact Information

The Collision Repair and Refinishing Technology program is in the Transport Systems Technologies Division. For more information, call the program chair at 704.330.4153 or the Transport Systems Technology Division at 704.330.4122.

### General Education Requirements

ENG 111	Writing and Inquiry	3.0
Select 3.0 credits from the following:		3.0
ENG 112	Writing and Research in the Disciplines	
ENG 113	Literature-Based Research	
ENG 114	Professional Research & Reporting	
Select 3.0 credits from the following:		3.0
COM 110	Introduction to Communication	
COM 231	Public Speaking	
Select 3.0 credits from the following:		3.0
MAT 110	Mathematical Measurement and Literacy	
MAT 143	Quantitative Literacy	
MAT 152	Statistical Methods I	
MAT 171	Precalculus Algebra	
Select 3.0 credits from the following:		3.0
ART 111	Art Appreciation	
ART 114	Art History Survey I	
ART 115	Art History Survey II	
HUM 120	Cultural Studies	
HUM 130	Myth in Human Culture	
MUS 110	Music Appreciation	
MUS 112	Introduction to Jazz	
PHI 215	Philosophical Issues	
PHI 240	Introduction to Ethics	
REL 110	World Religions	
Select 3.0 credits from the following:		3.0
ECO 251	Principles of Microeconomics	
ECO 252	Principles of Macroeconomics	
HIS 111	World Civilizations I	
HIS 112	World Civilizations II	
HIS 131	American History I	
HIS 132	American History II	
POL 120	American Government	
PSY 150	General Psychology	
SOC 210	Introduction to Sociology	

### Major Requirements

TRN 110	Introduction to Transport Technology	2.0
TRN 120	Basic Transportation Electricity	5.0

TRN 140	Transportation Climate Control	2.0
TRN 170	Pc Skills for Transportation	2.0
AUB 111	Painting & Refinishing I	4.0
AUB 112	Painting & Refinishing II	4.0
AUB 121	Non-Structural Damage I	3.0
AUB 131	Structural Damage I	4.0
AUB 114	Special Finishes	2.0
AUB 122	Non-Structural Damage II	4.0
AUB 132	Structural Damage II	4.0
AUB 136	Plastics & Adhesives	3.0
AUB 162	Autobody Estimating	2.0
TRN 180	Basic Welding for Transportation	3.0

### Technical Electives

Select 5.0 Credits from the Following:		5.0
AUB 141	Mechanical & Electrical Components I	
TRN 180A	Basic Welding for Transportation Lab	
TRN 140A	Transportation Climate Control Lab	
WBL 111	Work-Based Learning I	
WBL 122	Work-Based Learning II	

Total Credits 67

## Collision Repair and Refinishing Technology (D60130)

### Diploma Awarded

A Diploma in Collision Repair and Refinishing Technology is awarded by the College upon completion of this program.

## Admissions

- Completion of a high school diploma or equivalent is required as the foundation of a career in this area.
- Many courses have prerequisites or co-requisites; check the Courses section for details.

Note: Students must furnish required hand tools, textbooks, respirator and protective clothing. A list of these items can be obtained from an instructor or the program chair. Call the program chair at 704.330.4153 for a list.

## Contact Information

The Collision Repair and Refinishing Technology program is in the Transport Systems Technologies Division. For more information, call the program chair at 704.330.4153 or the Transport Systems Technology Division at 704.330.4122.

### General Education Requirements

ENG 111	Writing and Inquiry	3.0
or ENG 101	Applied Communications I	
MAT 110	Mathematical Measurement and Literacy	3.0

### Major Requirements

AUB 111	Painting & Refinishing I	4.0
AUB 112	Painting & Refinishing II	4.0
AUB 114	Special Finishes	2.0
AUB 121	Non-Structural Damage I	3.0
AUB 122	Non-Structural Damage II	4.0
AUB 131	Structural Damage I	4.0

AUB 132	Structural Damage II	4.0
AUB 136	Plastics & Adhesives	3.0
TRN 110	Introduction to Transport Technology	2.0
TRN 180	Basic Welding for Transportation	3.0
AUB 162	Autobody Estimating	2.0
WBL 112	Work-Based Learning I	2.0
AUB 141	Mechanical & Electrical Components I	3.0
TRN 180A	Basic Welding for Transportation Lab	1.0
Total Credits		47

## Collision Repair and Refinishing Technology Certificates (C60130)

- Collision Repair and Refinishing Technology Certificate with a Specialization in Painting and Refinishing (C60130-C1) (p. 142)
- Collision Repair and Refinishing Technology Certificate with a Specialization in Collision Repair (C60130-C2) (p. 142)
- Collision Repair and Refinishing Technology Certificate with a Specialization in Autobody Estimating (C60130-C3) (p. 142)

The certificates listed below can be earned in the Collision Repair and Refinishing Technology (D60130) program.

### Admissions

- Completion of a high school diploma or equivalent is required as the foundation of a career in this area.
- Many courses have prerequisites or co-requisites; check the Courses section for details.

### Contact Information

For more information, contact the Commercial Driver's License Instructor at 704.330.4158 or the Transport Systems Technologies Division at 704.330.4122.

## Collision Repair and Refinishing Technology Certificate with a Specialization in Painting and Refinishing (C60130-C1)

This certificate is also available to high school students enrolled in Career and College Promise.

### Major Requirements

AUB 111	Painting & Refinishing I	4.0
AUB 112	Painting & Refinishing II	4.0
AUB 114	Special Finishes	2.0
AUB 136	Plastics & Adhesives	3.0
Total Credits		13

## Collision Repair and Refinishing Technology Certificate with a Specialization in Collision Repair (C60130-C2)

### Major Requirements

AUB 121	Non-Structural Damage I	3.0
AUB 122	Non-Structural Damage II	4.0
AUB 131	Structural Damage I	4.0
AUB 132	Structural Damage II	4.0

TRN 180	Basic Welding for Transportation	3.0
Total Credits		18

## Collision Repair and Refinishing Technology Certificate with a Specialization in Autobody Estimating (C60130-C3)

### Major Requirements

AUB 131	Structural Damage I	4.0
AUB 132	Structural Damage II	4.0
AUB 162	Autobody Estimating	2.0
WBL 112	Work-Based Learning I	2.0
Total Credits		12

## Computer Engineering Technology

The AAS degree in Computer Engineering Technology is accepted at some colleges and universities as the first two years of a bachelor's-level engineering technology program. This program has been designed to include training in both hardware and software, emphasizing operating system concepts to provide a unified view of computer systems.

Computer Engineering Technology focuses on the circuitry of computers and some programming. Beginning with electrical fundamentals, course work progressively introduces electronics, circuit simulation, solid-state fundamentals, digital concepts, instrumentation, C++ programming, microprocessors, microcomputer applications, networking, operating systems, I/O hardware interfacing, industrial applications and data acquisition using LabView. Other course work includes the study of various fields associated with the electrical/electronic industry. Several opportunities for industry certifications are built into the program which allow students to add skills to their resume. Graduates should qualify for employment opportunities in electronics technology, computer service, computer networks, server maintenance, programming, and other areas requiring a knowledge of electronic and computer systems.

The Computer Engineering Technology curriculum provides the skills required to design and implement microprocessor and computer controlled equipment. Graduates should qualify for employment as engineering assistants or either computer, electrical, or electronic technicians with job titles such as electronics engineering technician, field service technician, maintenance technician, communications technician, electronic tester, electronic systems integrator, electronics and instrumentation technician, control technician, bench technician, electromechanical equipment assemblers, electronics and instrumentation technician, computer network support specialists, computer user support specialists, electronic home entertainment equipment installers and repairers.

The AAS degree in Computer Engineering Technology is accepted at some colleges and universities as the first two years of a bachelor's-level engineering technology program and graduates can transfer to a university program to finish a bachelor's degree, however there will be deficiencies. The Electronics Engineering Technology AAS Degree program is designed for students planning to continue to a four-year bachelor's degree in engineering technology.

Visit Computer Information Technology website to view degree options in computer programming, web technologies, or computer networking.

For specific information about potential positions and wages in Computer Engineering Technology employment, visit the Central Piedmont Career Coach website.

## Computer Engineering Technology (A40160)

### Degree Awarded

The Associate in Applied Science Degree - Computer Engineering Technology is awarded by the college upon completion of the program.

The AAS degree in Computer Engineering Technology is accepted at some colleges and universities as the first two years of a 4-year bachelor's-level engineering technology program.

### Program Accreditation

The Computer Engineering Technology program at Central Piedmont is accredited by the Engineering Technology Accreditation Commission of the Accreditation Board of Engineering and Technology (TAC of ABET), abet.org.

### How to Apply

**Complete a Central Piedmont admissions application through Get Started on the Central Piedmont website.**

### Contact Information

For a printer-friendly version of this information, download the Computer Engineering Technology Flyer. Educational Objectives also can be downloaded from the Computer Engineering Technology Program.

Current departmental news can be found in the Computer, Electrical and Electronics Engineering Technology Newsletter.

Contact Computer Engineering Technology faculty for advising or with any questions about the program.

The Computer Engineering Technology program is in the Engineering Technology Division. For additional information, visit the Engineering Technologies website, the program chair at 704.330.6860 or email dave.ross@cpcc.edu. (dave.ross@cpcc.edu)

#### General Education Requirements

ENG 111	Writing and Inquiry	3.0
Select 1 of the following:		3.0
ENG 112	Writing and Research in the Disciplines	
or ENG 113	Literature-Based Research	
or ENG 114	Professional Research & Reporting	
Select 1 of the following:		3.0
COM 110	Introduction to Communication	
or COM 231	Public Speaking	
MAT 171	Precalculus Algebra	4.0
Select 1 of the following:		3.0
ECO 251	Principles of Microeconomics	
or ECO 252	Principles of Macroeconomics	
or HIS 111	World Civilizations I	
or HIS 112	World Civilizations II	
or HIS 131	American History I	
or HIS 132	American History II	

- or POL 120 American Government
- or PSY 150 General Psychology
- or SOC 210 Introduction to Sociology

Select 1 of the following:		3.0
ART 111	Art Appreciation	
or ART 114	Art History Survey I	
or ART 115	Art History Survey II	
or HUM 120	Cultural Studies	
or HUM 130	Myth in Human Culture	
or MUS 110	Music Appreciation	
or MUS 112	Introduction to Jazz	
or PHI 215	Philosophical Issues	
or PHI 240	Introduction to Ethics	
or REL 110	World Religions	

<b>Major Requirements</b>		
CTI 130	Operating Systems and Device Foundation	6.0
ELN 131	Analog Electronics I	4.0
ELN 133	Digital Electronics	4.0
ELN 232	Introduction to Microprocessors	4.0
ELN 260	Prog Logic Controllers	4.0
Select 1 of the following two groups:		4.0
Group 1:		
ELC 131	Circuit Analysis I	
Group 2:		
ELC 138	DC Circuit Analysis	
ELC 139	AC Circuit Analysis	
Other Major Requirements:		
MAT 172	Precalculus Trigonometry	4.0
NET 125	Introduction to Networks	3.0
NET 126	Routing Basics	3.0
CSC 134	C++ Programming	3.0
ELC 133	Circuit Analysis II	4.0
ELC 135	Electrical Machines	3.0
EGR 110	Introduction to Engineering Technology	2.0
Select 1 of the following:		4.0
PHY 151	College Physics I	
or PHY 251	General Physics I	
Total Credits		71

**No diplomas are offered in Computer Engineering Technology.**

**No certificates are offered in Computer Engineering Technology.**

**CSC 134. C++ Programming. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0

This course introduces computer programming using the C++ programming language with object-oriented programming principles. Emphasis is placed on event-driven programming methods, including creating and manipulating objects, classes, and using object-oriented tools such as the class debugger. Upon completion, students should be able to design, code, test and debug at a beginning level.

Prerequisites: Take DRE 098 or ENG 111 with a minimum grade of C



**CTI 130. Operating Systems and Device Foundation. 6.0 Credits.**

Class-4.0. Clinical-0.0. Lab-4.0. Work-0.0

This course covers the basic hardware and software of a personal computer, including installation, operations and interaction with popular microcomputer operating systems. Topics include components identification, memory-system, peripheral installation and configuration, preventive maintenance, hardware diagnostics/repair, installation and optimization of system software, commercial programs, system configuration, and device-drivers. Upon completion, students should be able to select appropriate computer equipment and software, upgrade/maintain existing equipment and software, and troubleshoot/repair non-functioning personal computers.

**EGR 110. Introduction to Engineering Technology. 2.0 Credits.**

Class-1.0. Clinical-0.0. Lab-2.0. Work-0.0

This course introduces general topics relevant to engineering technology. Topics include career assessment, professional ethics, critical thinking and problem solving, usage of college resources for study and research, and using tools for engineering computations. Upon completion, students should be able to choose a career option in engineering technology and utilize college resources to meet their educational goals.

**ELC 131. Circuit Analysis I. 4.0 Credits.**

Class-3.0. Clinical-0.0. Lab-3.0. Work-0.0

This course introduces DC and AC electricity with an emphasis on circuit analysis, measurements, and operation of test equipment. Topics include DC and AC principles, circuit analysis laws and theorems, components, test equipment operation, circuit simulation, and other related topics. Upon completion, students should be able to interpret circuit schematics; design, construct, verify, and analyze DC/AC circuits; and properly use test equipment.

Corequisites: Take MAT 121 or MAT 171

**ELC 133. Circuit Analysis II. 4.0 Credits.**

Class-3.0. Clinical-0.0. Lab-3.0. Work-0.0

This course covers additional concepts of DC/AC electricity, the use of test equipment, and measurement techniques. Topics include the application of network theorems such as delta/wye transformations, Superposition Theorem, and other advanced circuit analysis principles. Upon completion, students should be able to construct and analyze DC/AC circuits used advanced circuit analysis theorems, circuit simulators, and test equipment. Prerequisites: Take ELC 131 Minimum grade C

**ELC 138. DC Circuit Analysis. 4.0 Credits.**

Class-3.0. Clinical-0.0. Lab-3.0. Work-0.0

This course introduces DC electricity with an emphasis on circuit analysis, measurements, and operation of test equipment. Topics include DC principles, circuit analysis laws and theorems, components, test equipment operation, circuit simulation, and other related topics. Upon completion, students should be able to interpret circuit schematics; design, construct, and analyze DC circuits; and properly use test equipment.

**ELC 139. AC Circuit Analysis. 4.0 Credits.**

Class-3.0. Clinical-0.0. Lab-3.0. Work-0.0

This course introduces AC electricity with an emphasis on circuit analysis, measurements, and operation of test equipment. Topics include AC voltages, circuit analysis laws and theorems, reactive components and circuits, transformers, test equipment operation, circuit simulation, and other related topics. Upon completion, students should be able to interpret AC circuit schematics; analyze and troubleshoot AC circuits; and properly use test equipment.

Prerequisites: Take ELC 138

**ELN 131. Analog Electronics I. 4.0 Credits.**

Class-3.0. Clinical-0.0. Lab-3.0. Work-0.0

This course introduces the characteristics and applications of semiconductor devices and circuits. Emphasis is placed on analysis, selection, biasing, and applications. Upon completion, students should be able to construct, analyze, verify, and troubleshoot analog circuits using appropriate techniques and test equipment.

Prerequisites: Take ELC 131 Minimum grade C

**ELN 133. Digital Electronics. 4.0 Credits.**

Class-3.0. Clinical-0.0. Lab-3.0. Work-0.0

This course covers combinational and sequential logic circuits. Topics include number systems, Boolean algebra, logic families, medium scale integration (MSI) and large scale integration (LSI) circuits, analog to digital (AD) and digital to analog (DA) conversion, and other related topics. Upon completion, students should be able to construct, analyze, verify, and troubleshoot digital circuits using appropriate techniques and test equipment.

**ELC 135. Electrical Machines. 3.0 Credits.**

Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0

This course covers magnetic circuits, transformers, DC/AC machines, and the three-phase circuit fundamentals including power factor. Topics include magnetic terms and calculations, transformer calculations based on primary or secondary equivalent circuits, and regulation and efficiency calculations. Upon completion, students should be able to perform regulation and efficiency calculations for DC/AC machine circuits.

Prerequisites: Take ELC 139 or ELC 131 Minimum grade C

**ELN 232. Introduction to Microprocessors. 4.0 Credits.**

Class-3.0. Clinical-0.0. Lab-3.0. Work-0.0

This course introduces microprocessor architecture and microcomputer systems including memory and input/output interfacing. Topics include low-level language programming, bus architecture, I/O systems, memory systems, interrupts, and other related topics. Upon completion, students should be able to interpret, analyze, verify, and troubleshoot fundamental microprocessor circuits and programs using appropriate techniques and test equipment.

Prerequisites: Take ELN 133 Minimum grade C

**ELN 260. Prog Logic Controllers. 4.0 Credits.**

Class-3.0. Clinical-0.0. Lab-3.0. Work-0.0

This course provides a detailed study of PLC applications, with a focus on design of industrial controls using the PLC. Topics include PLC components, memory organization, math instructions, documentation, input/output devices, and applying PLCs in industrial control systems. Upon completion, students should be able to select and program a PLC system to perform a wide variety of industrial control functions.

Prerequisites: Take ELC 213 or ELN 133 with a minimum grade C

**NET 125. Introduction to Networks. 3.0 Credits.**

Class-1.0. Clinical-0.0. Lab-4.0. Work-0.0

This course introduces the architecture, structure, functions, components, and models of the Internet and computer networks. Topics include introduction to the principles of IP addressing and fundamentals of Ethernet concepts, media, and operations. Upon completion, students should be able to build simple LANs, perform basic configurations for routers and switches, and implement IP addressing schemes.

**NET 126. Routing Basics. 3.0 Credits.** Class-1.0. Clinical-0.0. Lab-4.0. Work-0.0

This course focuses on initial router configuration, router software management, routing protocol configuration, TCP/IP, and access control lists (ACLs). Emphasis will be placed on the fundamentals of router configuration, managing router software, routing protocol, and access lists. Upon completion, students should have an understanding of routers and their role in WANs, router configuration, routing protocols, TCP/IP, troubleshooting, and ACLs.

Prerequisites: Take NET 125 Minimum grade C

## Computer-Integrated Machining Technology

Computer-Integrated Machining Technology curriculum is designed to develop skills in the theory and safe use of hand tools, power machinery, computerized machining equipment and sophisticated precision measurement instruments. Students learn to interpret blueprints, set up manual and CNC machines, perform basic and advanced machining operations and make decisions to insure that work quality is maintained. Employment opportunities for machining technicians exist in manufacturing industries, public institutions, government agencies and in a wide range of specialty machining shops.

The Computer-Integrated Machining Technology Program at Central Piedmont provides students with the opportunity to expand their knowledge and skills in CNC programming and a broader knowledge in CNC Graphics Programming. All projects are performed on full-scale industrial equipment used in local industry.

For specific information about potential positions and wages in Computer-Integrated Machining employment, visit the Central Piedmont Career Coach website.

## Computer-Integrated Machining Technology (A50210)

### Degree Awarded

The Associate in Applied Science degree - Computer- Integrated Machining Technology is awarded by the college upon completion of the program.

### Admissions

- High school diploma or equivalent is required.
- CPCC placement tests are required in English and mathematics. Developmental mathematics and English courses are available for students to build skills and knowledge.
- Consult with an advisement counselor regarding course placement and attend an orientation session after placement testing.
- Many courses have prerequisites or co-requisites; check the Courses section for details.

Note: Students who do not take program-related courses for two consecutive semesters must reenter the program under the Catalog in effect at the time of reentry.

## Contact Information

The Computer-Integrated Machining Technology program is in the Engineering Technologies Division. For more information, call the Program Chair at 704.330.3206.

### General Education Requirements

ENG 111	Writing and Inquiry	3.0
ENG 114	Professional Research & Reporting	3.0
Select 1 of the following:		3.0
COM 110	Introduction to Communication	
	or COM 231 Public Speaking	
Select 1 of the following:		3.0
MAT 110	Mathematical Measurement and Literacy	
	or MAT 121 Algebra/Trigonometry I	
Select 1 of the following:		3.0
ART 111	Art Appreciation	
	or ART 114 Art History Survey I	
	or ART 115 Art History Survey II	
	or HUM 120 Cultural Studies	
	or HUM 130 Myth in Human Culture	
	or MUS 110 Music Appreciation	
	or MUS 112 Introduction to Jazz	
	or PHI 215 Philosophical Issues	
	or PHI 240 Introduction to Ethics	
	or REL 110 World Religions	
Select 1 of the following:		3.0
ECO 251	Principles of Microeconomics	
	or ECO 252 Principles of Macroeconomics	
	or HIS 111 World Civilizations I	
	or HIS 112 World Civilizations II	
	or HIS 131 American History I	
	or HIS 132 American History II	
	or POL 120 American Government	
	or PSY 150 General Psychology	
	or SOC 210 Introduction to Sociology	

### Major Requirements

MAC 111	Machining Technology I	6.0
MAC 142	Machining Applications II	4.0
MAC 121	Introduction to CNC	2.0
MAC 122	CNC Turning	2.0
MAC 131	Blueprint Reading-Machining I	2.0
MAC 143	Machining Applications III	4.0
MAC 114	Introduction to Metrology	2.0
	or ISC 212 Metrology	
MAC 152	Advanced Machining Calculations	2.0
MAC 124	CNC Milling	2.0
MAC 222	Advanced CNC Turning	2.0
MAC 224	Advanced CNC Milling	2.0
MAC 234	Advanced Multi-Axis Machining	3.0
MAC 231	Cam: Computer Numerical Control Turning	3.0
MAC 232	CAM: Computer Numerical Control Milling	3.0
MAC 228	Advanced CNC Processes	3.0
EGR 125	Appl Software for Tech	2.0

DFT 154	Intro to Solid Modeling	3.0
<b>Technical Electives</b>		
Select 2 credits from the following:		2.0
ISC 112	Industrial Safety	
MEC 180	Engineering Materials	
WLD 112	Basic Welding Processes	
WBL 112	Work-Based Learning I	
WBL 122	Work-Based Learning II	
Total Credits		67

## Computer-Integrated Machining Technology Diploma (D50210)

Computer-Integrated Machining Technology Diploma gives individuals the opportunity to gain entry-level employment in the metal working industries. A basic knowledge of conventional machine tools, CNC programming and CNC operations is provided by hands-on activities on equipment commonly used in industry. Coursework will apply toward a Computer-Integrated Machining Technology A.A.S. Degree program.

### Degree Awarded

A Diploma in Computer-Integrated Machining Technology is awarded by the college upon completion of this program.

### Admissions

Completion of a high school diploma or the equivalent is encouraged as a foundation of a career in this area. Many courses have prerequisites or co-requisites; check the Course Descriptions section for details.

Note: Students who do not enroll in program-related courses for two consecutive semesters must reenter the program under Catalog program requirements in effect at the time of reentry.

### Contact Information

Computer-Integrated Machining Technology program is in the Engineering Technologies Division. For more information, call the Program Chair at 704.330.6608.

#### General Education Requirements

ENG 111	Writing and Inquiry	3.0
SOC 210	Introduction to Sociology	3.0

#### Major Requirements

MAC 111	Machining Technology I	6.0
MAC 131	Blueprint Reading-Machining I	2.0
MAC 142	Machining Applications II	4.0
MAC 114	Introduction to Metrology	2.0
MAC 121	Introduction to CNC	2.0
MAC 124	CNC Milling	2.0
MAC 122	CNC Turning	2.0
MAC 143	Machining Applications III	4.0
MAC 152	Advanced Machining Calculations	2.0
MAC 222	Advanced CNC Turning	2.0
MAC 224	Advanced CNC Milling	2.0
Total Credits		36

## Computer-Integrated Machining Technology Certificates (C50210)

- Computer-Integrated Machining Technology Certificate with a Specialization in CNC Programming and Operations (C50210-C1) (p. 146)
- Computer-Integrated Machining Technology Certificate Specialization in Basic Machining Skills (C50210-C3) (p. 146)
- Computer-Integrated Machining Technology Certificate with a Specialization in Motorsports Machining Certificate I (C50210-C4) (p. 147)
- Computer-Integrated Machining Technology Certificate with a Specialization in Computer-Integrated Machining Pathway (C50210-C6) (p. 147)
- Computer-Integrated Machining Technology Certificate with a Specialization in Advanced CNC Technology (C50210-C7) (p. 147)

## Computer-Integrated Machining Technology Certificate with a Specialization in CNC Programming and Operations (C50210-C1)

This certificate provides study in CNC programming and machining operations. Coursework includes manual programming, set-up and operation and provides in-depth study in both 2-D and 3-D Graphics programming. Coursework will apply toward a Computer-Integrated Machining Technology A.A.S. degree program.

### Certificate Awarded

A certificate is awarded in CNC Programming and Operations upon completion of this program.

### Admissions

- Completion of a high school diploma or equivalent is required as a foundation of a career in this area.
- Individuals entering this certificate program should have a basic knowledge of manual machining and/or minimum experience with CNC machine tools.
- Many courses have prerequisites or co-requisites; check the Courses section for details.

### Contact Information

Computer-Integrated Machining Technology Program is in the Engineering Technologies Division. For more information, call the Program Chair at 704.330.6608.

#### Major Requirements

MAC 121	Introduction to CNC	2.0
MAC 122	CNC Turning	2.0
MAC 124	CNC Milling	2.0
MAC 222	Advanced CNC Turning	2.0
MAC 224	Advanced CNC Milling	2.0
MAC 231	Cam: Computer Numerical Control Turning	3.0
MAC 232	CAM: Computer Numerical Control Milling	3.0
Total Credits		16

## Computer-Integrated Machining Technology Certificate Specialization in Basic Machining Skills (C50210-C3)

### Major Requirements

MAC 111	Machining Technology I	6.0
MAC 131	Blueprint Reading-Machining I	2.0
MAC 114	Introduction to Metrology	2.0
MAC 121	Introduction to CNC	2.0
Total Credits		12

## Computer-Integrated Machining Technology Certificate with a Specialization in Motorsports Machining Certificate I (C50210-C4)

This certificate provides the graduate with basic skills in the set-up and operation of conventional and computer numerical control machine tools used in the Motorsports machining labs.

### Certificate Awarded

A certificate is awarded in Motorsports Machining by the college upon completion of the program.

### Admissions

Completion of a high school diploma or equivalent is encouraged as a foundation of a career in this area.

### Contact Information

Computer-Integrated Machining Technology Program is in the Engineering Technologies Division. For more information, call the Program Chair at 704.330.6608.

### Major Requirements

MAC 111	Machining Technology I	6.0
MAC 121	Introduction to CNC	2.0
MAC 122	CNC Turning	2.0
MAC 114	Introduction to Metrology	2.0
MAC 124	CNC Milling	2.0
MAC 131	Blueprint Reading-Machining I	2.0
Total Credits		16

## Computer-Integrated Machining Technology Certificate with a Specialization in Computer-Integrated Machining Pathway (C50210-C6)

This certificate also is available to students enrolled in Career and College Promise.

### Major Requirements

MAC 111	Machining Technology I	6.0
MAC 131	Blueprint Reading-Machining I	2.0
MAC 121	Introduction to CNC	2.0
MAC 124	CNC Milling	2.0
Total Credits		12

## Computer-Integrated Machining Technology Certificate with a Specialization in Advanced CNC Technology (C50210-C7)

This certificate provides the graduate with enhanced skills in the operation and set up of multi-axis CNC machining centers. This certificate provides additional studies in multi-axis CNC machine tool operation.

### Certificate Awarded

A certificate is awarded in Advanced CNC Technology by the college upon completion of this program.

### Admissions

- Completion of a high school diploma or equivalent is encouraged as a foundation of a career in this area.
- Some courses have pre-requisites; check the Courses section for details.
- This certificate requires the completion of the Computer-Integrated Machining Technology Certificate Specialization in CNC Programming and Operations (C50210-C1) for admission.

### Contact information

Computer Integrated Machining Technology Program is in the Engineering Technologies Division. For more information, call the Program Chair at 704.330.6608.

### Major Requirements

DFT 151	CAD I	3.0
DFT 154	Intro to Solid Modeling	3.0
MAC 114	Introduction to Metrology	2.0
MAC 228	Advanced CNC Processes	3.0
MAC 232	CAM: Computer Numerical Control Milling	3.0
MAC 234	Advanced Multi-Axis Machining	3.0
Total Credits		17

## Construction Management Technology

This curriculum is designed to prepare individuals to apply technical knowledge and skills to the fields of architecture, construction, construction management and other associated professions.

Course work includes instruction in sustainable building and design, print reading, building codes, estimating, construction materials and methods, and other topics related to design and construction occupations.

Graduates of this pathway should qualify for entry-level jobs in architectural, engineering, construction and trades professions, as well as positions in industry and government.

This is a program that prepares individuals to supervise, manage and inspect construction sites, buildings and associated facilities. It includes instruction in site safety, personnel supervision, labor relations, diversity training, construction documentation, scheduling, resource and cost control, bid strategies, rework prevention, construction insurance and bonding, accident management and investigation, applicable law and regulations, and communication skills.



For specific information about potential positions and wages in Construction Management employment, visit the Central Piedmont Career Coach website.

## Construction Management Technology (A35190)

### Degree Awarded

The Construction Management Technology Program offers two degrees:

1. An A.A.S. degree in Construction Management Technology, and
2. an A.A.S. degree Construction Management Technology - University Transfer Track

Students planning to transfer to a four year baccalaureate program should refer to the transfer degree in Construction Management

The Construction Management curriculum is designed to prepare individuals to apply technical knowledge and skills to the fields of architecture, construction, construction management and other associated professions.

This program prepares individuals to supervise, manage and inspect construction sites, buildings and associated facilities. It includes instruction in site safety, personnel supervision, labor relations, diversity training, construction documentation, scheduling, resource and cost control, bid strategies, rework prevention, construction insurance and bonding, accident management and investigation, and applicable law and regulations.

Other course work includes instruction in sustainable building and design, print reading, building codes, estimating, construction materials and methods, and other topics related to design and construction occupations.

Graduates of this pathway should qualify for entry-level jobs in architectural, engineering, construction and trades professions, as well as positions in industry and government.

### Admissions

- Completion of a high school diploma or equivalent is required.
- Many courses have prerequisites. Check the Courses section for details.

### For More Information

The Construction Management program is in the Construction Technologies Division. For more information, contact the program chair at 704.330.4483 or the Construction Management Program office at 704.330.4408, weekdays from 8 a.m.–5 p.m.

#### General Education Requirements

ENG 111	Writing and Inquiry	3.0
ENG 112	Writing and Research in the Disciplines	3.0
COM 231	Public Speaking	3.0
Select 3 credits of the following:		3.0
MAT 110	Mathematical Measurement and Literacy	
MAT 143	Quantitative Literacy	
MAT 171	Precalculus Algebra	
Select 3 credits of the following:		3.0
ART 111	Art Appreciation	
ART 114	Art History Survey I	

ART 115	Art History Survey II	
HUM 120	Cultural Studies	
HUM 130	Myth in Human Culture	
MUS 110	Music Appreciation	
MUS 112	Introduction to Jazz	
PHI 215	Philosophical Issues	
PHI 240	Introduction to Ethics	
REL 110	World Religions	
Select 3 credits of the following:		3.0
ECO 251	Principles of Microeconomics	
ECO 252	Principles of Macroeconomics	
HIS 111	World Civilizations I	
HIS 112	World Civilizations II	
HIS 131	American History I	
HIS 132	American History II	
POL 120	American Government	
PSY 150	General Psychology	
SOC 210	Introduction to Sociology	
<b>Major Requirements</b>		
ARC 225	Architectural Building Information Modeling I	2.0
BPR 130	Print Reading-Construction	3.0
CMT 120	Codes and Inspections	3.0
CMT 210	Construction Management Fundamentals	3.0
CMT 218	Human Relations Issues	3.0
CMT 212	Total Safety Performance	3.0
CMT 214	Planning and Scheduling	3.0
CMT 216	Costs and Productivity	3.0
CMT 226	Applications Project	3.0
CST 111	Construction I	4.0
CST 241	Planning/Estimating I	3.0
SST 140	Green Building and Design Concepts	3.0
WOL 110	Basic Construction Skills	3.0
WBL 111	Work-Based Learning I	1.0
Select one of the following:		3.0
BUS 139	Entrepreneurship I	
BUS 230	Small Business Management	
Select 6 credits of the following:		6.0
ARC 112	Construction Materials & Methods	
AHR 113	Comfort Cooling	
ARC 114	Architectural CAD	
ARC 132	Specifications & Contracts	
ARC 221	Architectural 3-D CAD	
AHR 114	Heat Pump Technology	
PLU 111	Intro to Basic Plumbing	
PLU 115	Basic Plumbing	
PLU 140	Intro to Plumbing Codes	
MAS 140	Introduction to Masonry	
MAS 130	Masonry III	
CAR 110	Introduction to Carpentry	
WBL 110	World of Work	
AHR 130	HVAC Controls	
CAR 140	Basic Carpentry	

ARC 112	Construction Materials & Methods
ARC 131	Building Codes
ARC 132	Specifications & Contracts
ARC 133	Construction Document Analysis
ARC 225	Architectural Building Information Modeling I
ARC 226	Architectural Building Information Modeling II
BUS 110	Introduction to Business
CIV 111	Soils and Foundations
CIV 222	Reinforced Concrete
CIV 230	Construction Estimating
ELC 111	Introduction to Electricity
ELC 112	DC/AC Electricity
ELC 113	Residential Wiring
ELC 115	Industrial Wiring
SRV 110	Surveying I
SPA 111 & SPA 181	Elementary Spanish I and Spanish Lab 1
SRV 111	Surveying II
SST 110	Introduction to Sustainability
SST 120	Energy Use Analysis
SST 130	Modeling Renewable Energy
SST 210	Issues in Sustainability
WLD 112	Basic Welding Processes
WBL 121	Work-Based Learning II
WBL 131	Work-Based Learning III
WBL 211	Work-Based Learning IV
CST 110	Intro to Construction

Total Credits 67

### Construction Management Technology - University Transfer Track (A35190T)

#### General Education Requirements

ENG 111	Writing and Inquiry	3.0
ENG 112	Writing and Research in the Disciplines	3.0
COM 231	Public Speaking	3.0
MAT 171	Precalculus Algebra	4.0
Select one course from the following:		3.0
ART 111	Art Appreciation	
ART 114	Art History Survey I	
ART 115	Art History Survey II	
HUM 120	Cultural Studies	
HUM 130	Myth in Human Culture	
MUS 110	Music Appreciation	
MUS 112	Introduction to Jazz	
PHI 215	Philosophical Issues	
PHI 240	Introduction to Ethics	
REL 110	World Religions	
Select one course from the following:		3.0
ECO 251	Principles of Microeconomics	
ECO 252	Principles of Macroeconomics	
HIS 111	World Civilizations I	
HIS 112	World Civilizations II	

HIS 131	American History I
HIS 132	American History II
POL 120	American Government
PSY 150	General Psychology
SOC 210	Introduction to Sociology

#### Major Requirements:

ARC 225	Architectural Building Information Modeling I	2.0
BPR 130	Print Reading-Construction	3.0
CMT 120	Codes and Inspections	3.0
CMT 210	Construction Management Fundamentals	3.0
CMT 218	Human Relations Issues	3.0
CMT 212	Total Safety Performance	3.0
CMT 214	Planning and Scheduling	3.0
CMT 216	Costs and Productivity	3.0
CMT 226	Applications Project	3.0
WOL 110	Basic Construction Skills	3.0
CST 111	Construction I	4.0
CST 241	Planning/Estimating I	3.0
SST 140	Green Building and Design Concepts	3.0
WBL 111	Work-Based Learning I	1.0
ACC 120	Principles of Financial Accounting	4.0
BUS 115	Business Law I	3.0
PHY 151	College Physics I	4.0
SPA 111 & SPA 181	Elementary Spanish I and Spanish Lab 1	4.0
Total Credits		74

### No diplomas are offered in Construction Management Technology.

### Construction Management Technology Certificates (C35190)

The certificates listed below can be earned in the Construction Management (A35190) program.

- Construction Management Technology Certificate-Specialization in Fast Track Carpentry (C35190-C1) (p. 150)
- Construction Management Technology Certificate-Specialization in Entry Level Construction Supervision (C35190-C2) (p. 150)
- Construction Management Technology Certificate-Specialization in Entry Level Estimating I (C35190-C3) (p. 150)
- Construction Management Technology Certificate-Specialization in Entry Level Project Supervision (C35190-C5) (p. 150)
- Construction Management Technology Certificate-Specialization in Green Building (C35190-C7) (p. 150)
- Construction Management Technology Certificate-Specialization in Introduction to Building Code Inspector (C35190-C8) (p. 150)
- Construction Management Technology Certificate-Specialization in Entry Level Construction Skills (C35190-C9) (p. 150)

### Admissions

- Completion of a high school diploma or equivalent is encouraged as the foundation of a career in this area.

- Many courses have prerequisites or co-requisites; check the Courses section for details.

## Contact Information

For more information, call the Construction Technologies Division at 704.330.4421 or the Construction Management program office at 704.330.4408.

### Construction Management Technology Certificate with a Specialization – Fast Track Carpentry (C35190-C1)

This certificate also is available to high school students enrolled in Career and College Promise.

#### Major Requirements

BPR 130	Print Reading-Construction	3.0
CAR 140	Basic Carpentry	4.0
CMT 120	Codes and Inspections	3.0
WOL 110	Basic Construction Skills	3.0
WBL 111	Work-Based Learning I	1.0
Total Credits		14

### Construction Management Technology Certificate with a Specialization – Entry Level Construction Supervision (C35190-C2)

This certificate also is available to high school students enrolled in Career and College Promise.

#### Major Requirements

BPR 130	Print Reading-Construction	3.0
CMT 212	Total Safety Performance	3.0
BUS 139	Entrepreneurship I	3.0
CMT 210	Construction Management Fundamentals	3.0
CMT 218	Human Relations Issues	3.0
SST 140	Green Building and Design Concepts	3.0
Total Credits		18

### Construction Management Technology Certificate with a Specialization – Entry Level Estimating I (C35190-C3)

#### Major Requirements

Take one of the following courses:		3.0-4.0
ACC 120	Principles of Financial Accounting	
BUS 230	Small Business Management	
BUS 139	Entrepreneurship I	
BPR 130	Print Reading-Construction	3.0
CST 241	Planning/Estimating I	3.0
CMT 210	Construction Management Fundamentals	3.0
CIS 110	Introduction to Computers	3.0
Total Credits		15-16

### Construction Management Technology Certificate Specialization in Entry Level Project Supervision (C35190-C5)

#### Major Requirements

BPR 130	Print Reading-Construction	3.0
CMT 210	Construction Management Fundamentals	3.0
CMT 212	Total Safety Performance	3.0
CMT 214	Planning and Scheduling	3.0
CMT 216	Costs and Productivity	3.0
CMT 218	Human Relations Issues	3.0
Total Credits		18

### Construction Management Technology Certificate Specialization in Green Building (C35190-C7)

This certificate also is available to high school students enrolled in Career and College Promise.

#### Major Requirements

BPR 130	Print Reading-Construction	3.0
CMT 120	Codes and Inspections	3.0
CST 111	Construction I	4.0
SST 140	Green Building and Design Concepts	3.0
Total Credits		13

### Construction Management Technology Certificate Specialization in Introduction to Building Code Inspector (C35190-C8)

#### Major Requirements

ARC 112	Construction Materials & Methods	4.0
BPR 130	Print Reading-Construction	3.0
CMT 120	Codes and Inspections	3.0
CST 111	Construction I	4.0
WBL 111	Work-Based Learning I	1.0
WBL 121	Work-Based Learning II	1.0
Total Credits		16

### Construction Management Technology Certificate Specialization in Entry Level Construction Skills (C35190-C9)

This certificate is also available to students enrolled in Career and College Promise.

AHR 180	HVACR Customer Relations	1.0
BPR 130	Print Reading-Construction	3.0
CST 111	Construction I	4.0
ELC 111	Introduction to Electricity	3.0
WOL 110	Basic Construction Skills	3.0
WLD 112	Basic Welding Processes	2.0
Total Credits		16

## Cosmetology

The Cosmetology curriculum is designed to provide competency-based knowledge, scientific/artistic principles, and hands-on fundamentals associated with the cosmetology industry. The curriculum provides a simulated salon environment which enables students to develop manipulative skills.

Course work includes instruction in all phases of professional imaging, hair design, chemical processes, skin care, nail care, multi-cultural practices, business/computer principles, product knowledge, and other selected topics.

Graduates should qualify to sit for the State Board of Cosmetic Arts examination. Upon successfully passing the State Board exam, graduates are issued a license. Employment is available in beauty salons and related businesses.

For more information, visit the Cosmetology Program of Study website.

For specific information about potential positions and wages in Cosmetology employment, visit the Central Piedmont Career Coach website.

### Cosmetology, Associate Degree (A55140)

#### Degree Awarded

The Associate in Applied Science Degree – Cosmetology is awarded by the college upon completion of this program.

#### Admissions

- Complete an admissions application to Central Piedmont.
- A high school diploma or equivalent is required.
- Submit high school transcripts and any former college transcripts to Admissions, Records & Registration.
- Request all former college transcripts be evaluated for transfer credit to Central Piedmont
- Central Piedmont placement tests are required. Developmental courses in English and mathematics are available for students to build basic skills and knowledge.
- Consult with an advisement counselor and attend an orientation session following placement testing.
- Complete a Cosmetology Program Application.

#### Notes

Progression in this program is dependent upon a grade of “C” or better in all general education courses, as well as major and related courses.

Students applying to the Central Piedmont Cosmetology Program are required to submit a copy of their Social Security Card, Tax ID card or student visa information, government-issued Identification and proof of date of birth. They also must submit an acknowledgement of the NC State Board of Cosmetic Arts felony policy, found on the program application.

#### General Education Requirements

ENG 111	Writing and Inquiry	3.0
PSY 150	General Psychology	3.0
Select 3 credits of the following:		3.0
ENG 112	Writing and Research in the Disciplines	
ENG 113	Literature-Based Research	

ENG 114	Professional Research & Reporting	
Select 3 credits of the following:		3.0
COM 110	Introduction to Communication	
COM 231	Public Speaking	
Select 3 credits of the following:		3.0
MAT 110	Mathematical Measurement and Literacy	
MAT 143	Quantitative Literacy	
Select 3 credits of the following:		3.0
ART 111	Art Appreciation	
ART 114	Art History Survey I	
ART 115	Art History Survey II	
HUM 120	Cultural Studies	
HUM 130	Myth in Human Culture	
MUS 110	Music Appreciation	
MUS 112	Introduction to Jazz	
PHI 215	Philosophical Issues	
PHI 240	Introduction to Ethics	
REL 110	World Religions	

#### Major Requirements

COS 111	Cosmetology Concepts I	4.0
COS 112	Salon I	8.0
COS 113	Cosmetology Concepts II	4.0
COS 114	Salon II	8.0
COS 115	Cosmetology Concepts III	4.0
COS 116	Salon III	4.0
COS 117	Cosmetology Concepts IV	2.0
COS 118	Salon IV	7.0
COS 240	Contemporary Design	2.0
COS 223	Contemp Hair Coloring	2.0
BUS 230	Small Business Management	3.0
CIS 110	Introduction to Computers	3.0

Total Credits		69
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### Cosmetology Diploma (D55140)

#### Diploma Awarded

The Cosmetology Diploma is awarded by the college upon completion of this program.

#### Admissions

- Complete an admissions application to Central Piedmont.
- A high school diploma or equivalent is required.
- Submit high school transcripts and any former college transcripts to Admissions, Records & Registration.
- Request all former college transcripts be evaluated for transfer credit to Central Piedmont.
- Central Piedmont placement tests are required. Developmental courses in English and mathematics are available for students to build basic skills and knowledge.
- Consult with an advisement counselor and attend an orientation session following placement testing.
- Complete a Cosmetology Program Application.



## Notes

Progression in this program is dependent upon a grade of “C” or better in all general education courses, as well as major and related courses.

Students applying to the Central Piedmont Cosmetology Program are required to submit a copy of their Social Security Card, Tax ID card or student visa information, government-issued Identification and proof of date of birth. They also must submit an acknowledgement of the NC State Board of Cosmetic Arts felony policy, found on the program application.

### Cosmetology Diploma (D55140)

#### General Education Requirements

ENG 111	Writing and Inquiry	3.0
PSY 150	General Psychology	3.0

#### Core Courses

COS 111	Cosmetology Concepts I	4.0
COS 112	Salon I	8.0
COS 113	Cosmetology Concepts II	4.0
COS 114	Salon II	8.0
COS 115	Cosmetology Concepts III	4.0
COS 116	Salon III	4.0
COS 117	Cosmetology Concepts IV	2.0
COS 118	Salon IV	7.0

Total Credits		47
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### Cosmetology Certificates

#### Cosmetology Instructor Certificate (C55160)

##### Major Requirements

COS 271	Instructor Concepts I	5.0
COS 272	Instructor Practicum I	7.0
COS 273	Instructor Concepts II	5.0
COS 274	Instructor Practicum II	7.0

Total Credits		24
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#### Cosmetology Certificate (C55140-C1)

This certificate also is available to high school students through Career and College Promise.

The beauty industry offers highly skilled and personable professionals many employment opportunities in beauty salons, department stores, barbershops, hospitals, hotels, spas and resorts. Entrepreneurial careers include salon ownership, beauty product creation, freelance cosmetic artistry for movie sets and magazine photo shoots. Get started on a career in cosmetology by enrolling in the CCP Fundamentals program.

##### Major Requirements

COS 111	Cosmetology Concepts I	4.0
COS 112	Salon I	8.0
COS 113	Cosmetology Concepts II	4.0
COS 114	Salon II	8.0
COS 115	Cosmetology Concepts III	4.0
COS 116	Salon III	4.0

##### Other Major Requirements

COS 240	Contemporary Design	2.0
Total Credits		34

## Criminal Justice Technology

The Criminal Justice Technology curriculum is designed to provide knowledge of criminal justice systems and operations. Study focuses on local, state and federal law enforcement, judicial processes, corrections and security services. The criminal justice system’s role within society is explored. Emphasis is on criminal justice systems, criminology, juvenile justice, criminal and constitutional law, investigative principles, ethics and community relations. Additional study may include issues and concepts of government, counseling, communications, computers and technology.

Employment opportunities exist in a variety of local, state and federal law enforcement, corrections and security fields. Sample professions include: police officer, deputy sheriff, county detention officer, state trooper, intensive probation/parole surveillance officer, correctional officer and loss prevention specialist. Employment with criminal justice agencies is subject to specific agency criteria; therefore, completion of a degree, alone does not guarantee eligibility for employment.

For specific information about potential positions and wages in Criminal Justice employment, visit the Central Piedmont Career Coach website.

### Criminal Justice Technology (A55180)

#### Degree Awarded

The Associate in Applied Science Degree - Criminal Justice is awarded by the college upon completion of this program.

#### Admissions

- A high school diploma or equivalent is required.
- Some courses require placement tests prior to registration.
- Many courses have prerequisites or co-requisites; check the Courses section for details.

#### Notes

- Students should complete CJC 111 during their first semester
- A minimum grade of “C” in all CJC prefix courses is required for successful completion of the program.
- Students enrolling in WBL 112J must meet the following eligibility requirements:
  1. 2.5 grade point average
  2. 12 semesters hours of credit within the program of study (A55180)
  3. satisfactory completion of the following CJC courses: CJC 111, CJC 112, CJC 113, CJC 131, CJC 212, CJC 221 and CJC 231.
- It is recommended that students meet with the Criminal Justice program chair or faculty advisor prior to initial registration and for information on program certificates.

#### Contact Information

The Criminal Justice program is in the Public Safety Division. For more information, email [criminal.justice@cpcc.edu](mailto:criminal.justice@cpcc.edu) or call the Criminal Justice Program Chair, Jeri Guido, at 704.330.4107.

##### General Education Requirements

ENG 111	Writing and Inquiry	3.0
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ENG 114	Professional Research & Reporting	3.0
Select one of the following:		3.0
MAT 110	Mathematical Measurement and Literacy	
MAT 121	Algebra/Trigonometry I	
MAT 143	Quantitative Literacy	
MAT 152	Statistical Methods I	
MAT 171	Precalculus Algebra	
MAT 172	Precalculus Trigonometry	
MAT 271	Calculus I	
Select 3 credits from the following:		3.0
ECO 251	Principles of Microeconomics	
ECO 252	Principles of Macroeconomics	
HIS 111	World Civilizations I	
HIS 112	World Civilizations II	
HIS 131	American History I	
HIS 132	American History II	
POL 120	American Government	
PSY 150	General Psychology	
SOC 210	Introduction to Sociology	
Select 3 credits from the following:		3.0
ART 111	Art Appreciation	
ART 114	Art History Survey I	
ART 115	Art History Survey II	
HUM 120	Cultural Studies	
HUM 130	Myth in Human Culture	
MUS 110	Music Appreciation	
MUS 112	Introduction to Jazz	
PHI 215	Philosophical Issues	
PHI 240	Introduction to Ethics	
REL 110	World Religions	

**Major Requirements**

CJC 111	Introduction to Criminal Justice	3.0
CJC 112	Criminology	3.0
CJC 113	Juvenile Justice	3.0
CJC 131	Criminal Law	3.0
CJC 212	Ethics & Community Relations	3.0
CJC 221	Investigative Principles	4.0
CJC 231	Constitutional Law	3.0

Other Major Requirements:

WBL 112	Work-Based Learning I	2.0
CIS 110	Introduction to Computers	3.0

Take 1 of the following courses:

COM 110	Introduction to Communication	
COM 231	Public Speaking	

**Technical Electives**

Take 21 credits of the following: 21.0

ACA 111	College Student Success	
ACA 118	College Study Skills	
ASL 111	Elementary ASL I	
ASL 181	ASL Lab 1	
CCT 110	Introduction to Cyber Crime	
CCT 121	Computer Crime Investigation	

CJC 114	Investigative Photography	
CJC 120	Interviews/Interrogations	
CJC 121	Law Enforcement Operations	
CJC 122	Community Policing	
CJC 132	Court Procedure & Evidence	
CJC 141	Corrections	
CJC 151	Introduction to Loss Prevention	
CJC 160	Terrorism: Underlying Issues	
CJC 161	Introduction to Homeland Security	
CJC 162	Intelligence Analysis and Security Management	
CJC 163	Transportation and Border Security	
CJC 170	Critical Incident Mgmt for Public Safety	
CJC 193J	Selected Topics in 21st Century Policing	
CJC 211	Counseling	
CJC 213	Substance Abuse	
CJC 214	Victimology	
CJC 215	Organization & Administration	
CJC 222	Criminalistics	
CJC 223	Organized Crime	
CJC 225	Crisis Intervention	
CJC 232	Civil Liability	
CJC 233	Correctional Law	
CJC 241	Community-Based Corrections	
CJC 255	Issues in Criminal Justice Application	
CJC 293J		
PED 110	Fit and Well for Life	
PED 117	Weight Training I	
PSY 150	General Psychology	
PSY 231	Forensic Psychology	
PSY 237	Social Psychology	
PSY 281	Abnormal Psychology	
SPA 111	Elementary Spanish I	
SPA 181	Spanish Lab 1	

Total Credits 66

**No diplomas are offered in Criminal Justice Technology.**

**Criminal Justice Certificates (C55180)**

In addition to the Criminal Justice Technology degree (A55180), students can earn the following certificates. For more information, email [criminal.justice@cpcc.edu](mailto:criminal.justice@cpcc.edu).

- Criminal Justice Technology Certificate with a Specialization in Criminal Justice Management and Administration (C55180-C2) (p. 154)
- Criminal Justice Technology Certificate with a Specialization in Essentials of the Criminal Justice System (C55180-C3) (p. 154)
- Criminal Justice Technology Certificate with a Specialization in Essential Police Operations (C55180-C4) (p. )
- Criminal Justice Technology Certificate with a Specialization in Courts and the Law (C55180-C5) (p. 154)
- Criminal Justice Technology Certificate with a Specialization in Corrections (C55180-C6) (p. 154)

- Criminal Justice Technology Certificate with a Specialization in Criminal Justice and Special Populations (C55180-C7) (p. 154)
- Criminal Justice Technology Certificate with a Specialization in Crime Scene and Criminal Investigations (C55180-C8) (p. 154)
- Criminal Justice Technology Certificate with a Specialization in Basics of Criminal Justice (C55180-C9) (p. 154)
- Criminal Justice Technology Certificate with a Specialization in Homeland Security (C55180-10) (p. 154)
- Criminal Justice Technology Certificate with a Specialization in Crime Causation (C55180-11) (p. 155)
- Criminal Justice Technology Certificate with a Specialization in UNC Charlotte Criminal Justice Transfer (C55180-12) (p. 155)
- Criminal Justice Technology Certificate with a Specialization in Basic Law Enforcement Preparation (C55180-13) (p. 155)

### Criminal Justice Technology Certificate with a Specialization in Criminal Justice Management and Administration (C55180-C2)

#### Major Requirements

CJC 212	Ethics & Community Relations	3.0
CJC 170	Critical Incident Mgmt for Public Safety	3.0
CJC 211	Counseling	3.0
CJC 215	Organization & Administration	3.0
Total Credits		12

### Criminal Justice Technology Certificate with a Specialization in Essentials of the Criminal Justice System (C55180-C3)

#### Major Requirements

CJC 111	Introduction to Criminal Justice	3.0
CJC 112	Criminology	3.0
CJC 131	Criminal Law	3.0
CJC 141	Corrections	3.0
CJC 151	Introduction to Loss Prevention	3.0
Total Credits		15

### Criminal Justice Technology Certificate with a Specialization in Essential Police Operations (C55180-C4)

#### Major Requirements

CJC 121	Law Enforcement Operations	3.0
CJC 122	Community Policing	3.0
CJC 221	Investigative Principles	4.0
CJC 212	Ethics & Community Relations	3.0
Total Credits		13

### Criminal Justice Technology Certificate with a Specialization in Courts and the Law (C55180-C5)

#### Major Requirements

CJC 131	Criminal Law	3.0
CJC 132	Court Procedure & Evidence	3.0

CJC 231	Constitutional Law	3.0
CJC 232	Civil Liability	3.0
Total Credits		12

### Criminal Justice Technology Certificate with a Specialization in Corrections (C55180-C6)

#### Major Requirements

CJC 141	Corrections	3.0
CJC 233	Correctional Law	3.0
CJC 241	Community-Based Corrections	3.0
CJC 213	Substance Abuse	3.0
Total Credits		12

### Criminal Justice Technology Certificate with a Specialization in Criminal Justice and Special Populations (C55180-C7)

#### Major Requirements

CJC 113	Juvenile Justice	3.0
CJC 213	Substance Abuse	3.0
CJC 214	Victimology	3.0
CJC 223	Organized Crime	3.0
Total Credits		12

### Criminal Justice Technology Certificate with a Specialization in Crime Scene and Criminal Investigations (C55180-C8)

#### Major Requirements

CJC 221	Investigative Principles	4.0
CJC 114	Investigative Photography	2.0
CJC 120	Interviews/Interrogations	2.0
CJC 222	Criminalistics	3.0
CCT 121	Computer Crime Investigation	4.0
Total Credits		15

### Criminal Justice Technology Certificate with a Specialization in Basics of Criminal Justice (C55180-C9)

This certificate is also available to high school students dually enrolled in Career and College Promise.

#### Major Requirements

CJC 111	Introduction to Criminal Justice	3.0
CJC 112	Criminology	3.0
CJC 131	Criminal Law	3.0
CJC 231	Constitutional Law	3.0
Total Credits		12

### Criminal Justice Technology Certificate with a Specialization in Homeland Security (C55180-10)

#### Major Requirements

CJC 160	Terrorism: Underlying Issues	3.0
CJC 161	Introduction to Homeland Security	3.0

CJC 162	Intelligence Analysis and Security Management	3.0
CJC 163	Transportation and Border Security	3.0
Total Credits		12

### Criminal Justice Technology Certificate with a Specialization in Crime Causation (C55180-11)

**Major Requirements**

CJC 112	Criminology	3.0
CJC 113	Juvenile Justice	3.0
CJC 211	Counseling	3.0
CJC 214	Victimology	3.0
Total Credits		12

### Criminal Justice Technology Certificate with a Specialization in UNCC Criminal Justice Transfer (C55180-12)

**Major Requirements**

CJC 111	Introduction to Criminal Justice	3.0
CJC 113	Juvenile Justice	3.0
CJC 212	Ethics & Community Relations	3.0
MAT 152	Statistical Methods I	4.0
SPA 111	Elementary Spanish I	3.0
SPA 181	Spanish Lab 1	1.0
Total Credits		17

### Criminal Justice Technology Certificate Specialization in Basic Law Enforcement Preparation (C55180-13)

**Major Requirements**

PED 110	Fit and Well for Life	2.0
ACA 118	College Study Skills	2.0
ENG 111	Writing and Inquiry	3.0
CJC 122	Community Policing	3.0
PED 117	Weight Training I	1.0
COM 231	Public Speaking	3.0
SEL 293	Selected Topics in _____	3.0
Total Credits		17

## Culinary Arts

The Culinary Arts curriculum provides specific training required to prepare students to assume positions as trained culinary professionals in a variety of foodservice settings including full-service restaurants, hotels, resorts, clubs, catering operations, contract foodservice and healthcare facilities.

Students are provided theoretical knowledge/practical applications to acquire critical competencies for industry demands, including environmental stewardship, operational efficiencies and professionalism. Courses include: sanitation/safety, baking, garde manger, culinary fundamentals/production skills, nutrition, customer service, purchasing/cost control and human resource management.

Graduates should qualify for entry-level opportunities, including prep cook, line cook and station chef. American Culinary Federation certification may be available to graduates. With experience, graduates may advance to

positions including sous chef, pastry chef, executive chef or foodservice manager.

For specific information about potential positions and wages in Culinary Arts employment, visit the Central Piedmont Career Coach website.

## Culinary Arts (A55150)

### Degree Awarded

The Associate in Applied Science degree – Culinary Arts is awarded by the college upon completion of this program.

### Admissions

- Complete an admissions application to Central Piedmont.
- Submit an official high school diploma as well as college transcripts to the Admissions, Records & Registration.
- Complete all necessary developmental studies courses prior to beginning CUL, HRM and BPA prefix courses.
- Consult with an academic advisor regarding course placement after placement testing.
- Consult with Culinary Arts Program Chair, Jess Cochran, by calling 704.330.6785 before course registration.
- Many courses have prerequisites or co-requisites; check the Courses section for details.
- Students must have a CUL, HRM, or BPA program code.

### Notes

- Progression in this program is dependent upon a score of “C” or better in all courses with CUL, HRM and BPA prefixes.
- All CUL and BPA lab classes require student accident medical insurance.

### Contact Information

The Culinary Arts program is in the Hospitality Education Division. For more information, contact the Program Chair at 704.330.6785 or the Hospitality Education Division at 704.330.6721.

x6341

#### General Education Requirements

ENG 111	Writing and Inquiry	3.0
Select 3 credits from the following:		3.0
ENG 112	Writing and Research in the Disciplines	
ENG 113	Literature-Based Research	
ENG 114	Professional Research & Reporting	
Select 3 credits from the following:		3.0
COM 110	Introduction to Communication	
COM 231	Public Speaking	
Select 3-4 credits from the following:		3.0
ART 111	Art Appreciation	
ART 114	Art History Survey I	
ART 115	Art History Survey II	
HUM 120	Cultural Studies	
HUM 130	Myth in Human Culture	
MUS 110	Music Appreciation	
MUS 112	Introduction to Jazz	
PHI 215	Philosophical Issues	



PHI 240	Introduction to Ethics	
REL 110	World Religions	
Select 3 credits from the following:		3.0
ECO 251	Principles of Microeconomics	
ECO 252	Principles of Macroeconomics	
HIS 111	World Civilizations I	
HIS 112	World Civilizations II	
HIS 131	American History I	
HIS 132	American History II	
POL 120	American Government	
PSY 150	General Psychology	
SOC 210	Introduction to Sociology	
Select 3 credits from the following:		3.0
MAT 110	Mathematical Measurement and Literacy	
MAT 121	Algebra/Trigonometry I	
MAT 143	Quantitative Literacy	
MAT 152	Statistical Methods I	
MAT 171	Precalculus Algebra	
MAT 271	Calculus I	
<b>Major Requirements</b>		
CUL 110	Sanitation and Safety	2.0
CUL 111	Success in Hospitality Studies	1.0
CUL 112	Nutrition for Foodservice	3.0
CUL 130	Menu Design	2.0
CUL 135	Food and Beverage Service	2.0
CUL 135A	Food and Beverage Service Lab	1.0
CUL 140	Culinary Skills I	5.0
CUL 140A	Culinary Skills I Lab	1.0
CUL 170	Garde Manger I	3.0
CUL 170A	Garde Manger I Lab	1.0
CUL 160	Baking I	3.0
CUL 160A	Baking I Lab	1.0
CUL 240	Culinary Skills II	5.0
CUL 240A	Culinary Skills II Lab	1.0
Select 3.0 credits from the following:		3.0
CUL 270	Garde Manger II	
CUL 270A	Garde Manger II Lab	
CUL 283	Farm-To-Table	
CUL 285	Competition Fundamentals	
CUL 260A	Baking II Lab	1.0
CUL 260	Baking II	3.0
CUL 245	Contemporary Cuisines	5.0
CUL 245A	Contemporary Cuisines Lab	1.0
HRM 245	Human Resource Management-Hospitality	3.0
HRM 220	Cost Control-Food and Beverage	3.0
HRM 225	Beverage Management	3.0
CUL 273	Career Development	1.0
WBL 112	Work-Based Learning I	2.0
Total Credits		74

## Culinary Arts Certificate (C55150)

The following certificates are available:

- Culinary Arts Certificate Specialization in Culinary Skills (C55150-C1) (p. 156)
- Culinary Arts Certificate Specialization in Certified Fundamentals Cook (C55150-C2) (p. 156)
- Culinary Arts Certificate Specialization in Baking (C55150-C3) (p. 157)
- Culinary Arts Certificate Specialization in Cold Foods (C55150-C4) (p. 157)
- Culinary Arts Certificate Specialization in Sustainable Food Systems and AgriTourism (C55150-C6) (p. )
- Culinary Arts Certificate Specialization in Culinary Arts (C55150-C7)

### Culinary Arts Certificate Specialization in Culinary Skills (C55150-C1)

These certificates are designed for those students wanting basic training in Culinary Arts. Certificates are “stackable” credentials and can be counted toward completion of an associate degree in Culinary Arts.

### Admissions

- Complete a Central Piedmont Admissions Form.
- Submit an official high school diploma, as well as college transcripts, to Central Piedmont Student Records.
- Complete all necessary developmental studies courses prior to beginning CUL, HRM and BPA prefix courses.
- Make an appointment and meet with an academic advisor.
- Make an appointment and meet with Culinary Arts Program Chair, Jess Cochran, by calling 704.330.6785.
- Many courses have prerequisites or co-requisites; Check the Courses section for details.
- Students must have a CUL, HRM or BPA program code.

### Notes

- Progression in this program is dependent upon a score of “C” or better in all courses with CUL, HRM and BPA prefixes.
- All CUL and BPA lab classes require student accident medical insurance.

### Contact Information

The Culinary Arts program is in the Hospitality Education Division. For more information, contact the program chair at 704.330.6785 or the Hospitality Education Division at 704.330.6721.

CUL 110	Sanitation and Safety	2.0
CUL 140	Culinary Skills I	5.0
CUL 140A	Culinary Skills I Lab	1.0
CUL 111	Success in Hospitality Studies	1.0
CUL 240	Culinary Skills II	5.0
CUL 240A	Culinary Skills II Lab	1.0
Total Credits		15

**No diplomas are offered in Culinary Arts.**

### Culinary Arts Certificate Specialization in Certified Fundamentals Cook (C55150-C2)

This certificate qualifies students for CFC designation from the American Culinary Federation.

Major Requirements

CUL 110	Sanitation and Safety	2.0
CUL 112	Nutrition for Foodservice	3.0
HRM 220	Cost Control-Food and Beverage	3.0
CUL 140	Culinary Skills I	5.0
CUL 140A	Culinary Skills I Lab	1.0
WBL 111	Work-Based Learning I	1.0
Total Credits		15

### Culinary Arts Certificate Specialization in Baking (C55150-C3)

This certificate will appeal to students seeking entry level positions in a bakery.

Major Requirements

CUL 110	Sanitation and Safety	2.0
CUL 140	Culinary Skills I	5.0
CUL 140A	Culinary Skills I Lab	1.0
CUL 160	Baking I	3.0
CUL 160A	Baking I Lab	1.0
CUL 260	Baking II	3.0
CUL 260A	Baking II Lab	1.0
Total Credits		16

### Culinary Arts Certificate Specialization in Cold Foods (C55150-C4)

This certificate will appeal to students seeking entry level Garde Manger positions in a restaurant, hotel, or club.

Major Requirements

CUL 110	Sanitation and Safety	2.0
CUL 140	Culinary Skills I	5.0
CUL 140A	Culinary Skills I Lab	1.0
CUL 170	Garde Manger I	3.0
CUL 170A	Garde Manger I Lab	1.0
CUL 270	Garde Manger II	3.0
CUL 270A	Garde Manger II Lab	1.0
Total Credits		16

### Culinary Arts Certificate Specialization in Sustainable Food Systems and AgriTourism (C55150-C6)

This certificate is for students interested in the farm-to-table movement and those who want to grow foods to sell to foodservice establishments.

\*\*C55150C2 is a prerequisite for this certificate.

Major Requirements

HRM 110	Introduction to Hospitality and Tourism	3.0
HOR 142	Fruit & Vegetable Production	2.0
SST 110	Introduction to Sustainability	3.0

BUS 230	Small Business Management	3.0
CUL 283	Farm-To-Table	5.0
Total Credits		16

### Culinary Arts Certificate Specialization in Culinary Arts (C55150-C7)

CUL 110	Sanitation and Safety	2.0
CUL 130	Menu Design	2.0
CUL 140	Culinary Skills I	5.0
CUL 140A	Culinary Skills I Lab	1.0
CUL 285	Competition Fundamentals	3.0
Total Credits		13

## Cytotechnology

Cytotechnology is an advanced allied health career which prepares students to use specialized equipment to study cells for detecting cancer, hormonal abnormalities and other pathological disease processes. Individuals entering this curriculum must have earned a bachelor's degree with a concentration in the biological sciences.

Course work includes entry-level knowledge and skills in cell collection and preparation and microscopic use to interpret specimens. Graduates work in conjunction with pathologists to perform special diagnostic procedures.

Upon successful completion of the program, graduates receive a certificate in cytotechnology and are eligible to take the National Board of Certification Examination of the American Society for Clinical Pathology (ASCP). Cytotechnologists may find employment in hospital and university laboratories, private laboratories, private companies and research facilities.

For specific information about potential positions and wages in cytotechnology employment, visit the Central Piedmont Career Coach website.

**No degrees are offered in Cytotechnology.**

**No diplomas are offered in Cytotechnology.**

**Cytotechnology (C45220)**

**Certificate Awarded**

A Certificate in Cytotechnology is awarded by the college upon successful completion of the program.

### Admissions

All students wishing to apply to the Cytotechnology Program must have completed prior to admission:

- A Bachelors degree from an accredited college or university that includes:

- Biology: 20 semester hours (30 quarter hours)
- Chemistry: 8 semester hours (12 quarter hours)
- Mathematics: 3 semester hours (5 quarter hours)
- Humanities: min. of 4 semester hours (6 quarter hours)

## Programs of Study

- A Grade Point Average of 2.5 in sciences courses, as well as an overall 2.0 GPA is recommended.
- An admissions application to Central Piedmont
- All prior college transcripts to Central Piedmont Admissions, Records & Registration with request for review for transfer
- Two letters of recommendation to the Cytotechnology Program Chair from previous science professors
- An interview with the Cytotechnology Program Chair.

### International Students also must submit:

- Scores from both the Test of Spoken English (TSE) and the Test of English as a Foreign Language (TOEFL) prior to the application deadline.
- Transcript evaluation for course work completed outside the U.S. from an agency approved by the American Society for Clinical Pathology. A list of these agencies may be obtained by calling the ASCP at 800.267.2727.

## Notes

The Cytotechnology program is a full-time, 12-month program that begins fall semester of each year. Progression in the program is dependent on satisfying course prerequisites, co-requisites and meeting minimal levels of performance for each course. Graduates of this program may apply to take the Cytotechnology Certification Examination administered by the Board of Certification of the American Society for Clinical Pathology.

The Cytotechnology program at Central Piedmont is accredited by the Commission on Accreditation of Allied Health Education Programs (CAAHEP) on recommendation of the Cytotechnology Programs Review Committee (CPRC) of the American Society of Cytopathology (ASC).

CAAHEP  
1361 Park Street  
Clearwater, FL 33756  
727.210.2350  
caahep.org

In addition to tuition and textbooks, costs of the program include the following: uniforms, lab coat, a physical examination including immunizations (tetanus toxoid, Hepatitis B vaccinations [series of three], TB test, color blindness test, etc.), costs associated with clinical travel and housing and registration fee for the Board of Certification Examination.

In order to participate in clinical education experiences at health care facilities, students may be required to submit results of a NC state or national criminal background check at their own expense. As a condition of program admission, students may be required to verify that they are United States citizens or are otherwise legally authorized residents of the United States.

## Contact Information

The Cytotechnology program is in the Medical Careers and Cosmetology Division. For more information, visit the Cytotechnology website. For further assistance, contact the Program Chair at 704.330.6283.

### Major Requirements

CYT 210	Introduction to Clinical Cytology	4.0
CYT 212	Intro to Cyto Techniques	4.0
CYT 214	Gynecological Cytology	14.0
CYT 216	Clinical and Diagnostic Interpretation I	4.0

CYT 220	Non-Gynecological Cytology	12.0
CYT 222	Cytopreparation Techniques	2.0
CYT 224	Gynecological Cytology Clinical Practicum I	4.0
CYT 226	Clinical and Diagnostic Interpretation II	4.0
CYT 230	Non-Gynecological Cytology Clinical Practicum	2.0
CYT 232	Clinical Cytology Practicum	1.0
CYT 234	Gynecological Cytology Clinical Practicum II	3.0
CYT 236	Cytology Literature Review	1.0
CYT 238	Ancillary Studies in Cytopathology	2.0
Total Credits		57

## Dental Assisting

The Dental Assisting curriculum prepares individuals to assist the dentist in the delivery of dental treatment and to function as integral members of the dental team while performing chairside and related office and laboratory procedures.

Coursework includes instruction in general studies, biomedical sciences, dental sciences, clinical sciences and clinical practice. A combination of lecture, laboratory and clinical experiences provide students with knowledge of infection/hazard control, radiography, dental materials, preventive dentistry, head and neck anatomy, dental and medical emergencies, and clinical procedures.

Graduates may be eligible to take the Dental Assisting National Board Examination to become Certified Dental Assistants. As a Dental Assistant II, defined by the Dental Laws of North Carolina, graduates work in dental offices and other related areas.

For specific information about potential positions and wages in Dental Assisting employment, visit the Central Piedmont Career Coach website.

## No degrees are offered for Dental Assisting.

## Dental Assisting Diploma (D45240)

### Diploma Awarded

A Diploma in Dental Assisting is awarded by the college upon completion of this program.

## Program Accreditation

The Dental Assisting Program at Central Piedmont is accredited by the American Dental Association, Commission on Dental Accreditation. (CODA)

## Admissions

Please refer to the Admission Steps for degree, diploma, or certificate students:

- Complete a general application for admission to Central Piedmont
- Submit high school, as well as college transcripts to Admissions, Registration & Records.
- Schedule a meeting with an academic advisor to determine if placement tests are required. If so, take tests and review placement test scores and program information to select courses for registration.
- Complete and submit a Dental Assisting Program Application by deadline date.

- Progression in this program is dependent upon a grade of “C” or better in all general education courses, as well as major and related courses.
- Students are encouraged to attend available Program Information Sessions.

## Notes

Costs of this program, in addition to tuition and textbooks, include school uniforms and supplies, fees for professional organization dues and national board testing, a current physical examination, blood and drug screen tests and updated immunizations.

Reliable transportation is needed to meet off campus clinical rotation requirements.

Students must be certified by the American Heart Association in “Health Care Provider Level” CPR or by the American Red Cross in “CPR for the Professional Rescuer” prior to registering.

Students must successfully complete all prerequisite DEN courses prior to beginning clinical rotations.

In order to participate in clinical education experiences at health care facilities, students may be required to submit results of a NC state or national criminal background check at their own expense. As a condition of program admission, students may be required to verify they are United States citizens or are otherwise legally authorized residents of the United States.

## Contact Information

The Dental Assisting program is in the Health Sciences Division. For more information, visit the Dental Assisting website. If further assistance is needed, contact the Dental Assisting department at 704-330-4604.

### General Education Requirements

ENG 111	Writing and Inquiry	3.0
COM 231	Public Speaking	3.0
or COM 110	Introduction to Communication	

### Major Requirements

DEN 110	Orofacial Anatomy	3.0
DEN 101	Preclinical Procedures	7.0
DEN 102	Dental Materials	4.0
DEN 103	Dental Sciences	2.0
DEN 104	Dental Health Education	3.0
DEN 105	Practice Management	2.0
DEN 106	Clinical Practice I	6.0
DEN 107	Clinical Practice II	5.0
DEN 111	Infection/Hazard Control	2.0
DEN 112	Dental Radiography	3.0
Other Major Requirements:		
BIO 163	Basic Anatomy & Physiology	5.0
Total Credits		48

## No certificates are offered for Dental Assisting.

## Dental Hygiene

The Dental Hygiene curriculum prepares individuals with the knowledge and skills to assess, plan, implement and evaluate dental hygiene care for the individual and the community.

Students learn to prepare the operatory, take patient histories, note abnormalities, plan care, teach oral hygiene techniques, provide periodontal therapy, expose radiographs, apply preventive agents, complete necessary chart entries and perform other procedures related to dental hygiene care.

Graduates of this program may be eligible to take national and state/regional examinations for licensure which are required to practice dental hygiene. Employment opportunities include positions in dental offices, hospital clinics, schools, public health agencies, industry and professional education.

For specific information about potential positions and wages in Dental Hygiene employment, visit the Central Piedmont Career Coach website.

## Dental Hygiene (A45260)

### Degree Awarded

The Associate in Applied Science degree - Dental Hygiene Degree is awarded by the college upon completion of this program.

### Program Admission Steps

- Complete an admissions application to Central Piedmont.
- Submit high school transcripts, as well as any college transcripts, to Admissions, Records & Registration on second floor of the Central High Building.
- Take required placement tests or obtain a waiver.
- Meet with a counselor or an advisor to review placement test scores, program information and select courses for registration.
- Take applicable Developmental Education courses.
- Complete and submit a Dental Hygiene Application by the deadline date.
- Take the Test of Essential Academic Skills (TEAS), ATI TEAS
- Check the Courses section for details, as many courses have prerequisite or co-requisite requirements.

Refer to Admission Steps for Degree-Seeking or Transfer students from Get Started on the college home page.

In any Associate Degree Health Sciences program for which there are more applicants who have completed pre-admission requirements than there are positions, admission points are assigned according to the applicant’s documented record. Criteria for selection includes scores on the TEAS test, past academic performance and experience in the field of interest.

### Additional Credentials

- All students are required to be certified in First Aid and Health Care Provider CPR or CPR for Professional Rescuer before entering the Dental Hygiene Program.
- Students must complete a minimum of CHM 121 and 121A or college equivalent with a grade of “C” or higher to apply to the dental hygiene program. The chemistry requirement must be completed not more than five years prior to acceptance.



## Programs of Study

- In order to participate in clinical education experiences at health care facilities, students may be required to submit results of a NC state or national criminal background check at their own expense.

## Notes

Licensure to practice dental hygiene is required prior to working in any state or jurisdiction. The North Carolina State Board of Dental Examiners may request information regarding conviction of a felony and/or misdemeanor and/or current charges on the application for licensure and may decide not to license an individual, based on the results of an investigation.

Costs of this program, in addition to tuition and textbooks, include uniforms, instruments, physical examination and specific vaccinations.

Progression in this program is dependent upon a grade of "C" or better in all general education courses, as well as major and related courses.

## Contact Information

The Dental Hygiene program is in the Health Sciences Division. For more information, visit the Dental Hygiene website. For further assistance, contact the Program Chair at 704.330.6365.

### General Education Requirements

ENG 111	Writing and Inquiry	3.0
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SOC 210	Introduction to Sociology	3.0
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COM 231	Public Speaking	3.0
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Select 3 credits of the following:		3.0
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ENG 112	Writing and Research in the Disciplines	
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ENG 113	Literature-Based Research	
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ENG 114	Professional Research & Reporting	
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Select 3 credits of the following:		3.0
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MAT 110	Mathematical Measurement and Literacy	
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MAT 143	Quantitative Literacy	
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MAT 152	Statistical Methods I	
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Select 3 credits of the following:		3.0
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ART 111	Art Appreciation	
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ART 114	Art History Survey I	
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ART 115	Art History Survey II	
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HUM 120	Cultural Studies	
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HUM 130	Myth in Human Culture	
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MUS 110	Music Appreciation	
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MUS 112	Introduction to Jazz	
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PHI 215	Philosophical Issues	
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PHI 240	Introduction to Ethics	
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REL 110	World Religions	
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### Major Requirements

BIO 175	General Microbiology	3.0
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DEN 110	Orofacial Anatomy	3.0
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DEN 111	Infection/Hazard Control	2.0
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DEN 112	Dental Radiography	3.0
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DEN 120	Dental Hygiene Preclinic Lecture	2.0
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DEN 121	Dental Hygiene Preclinical Lab	2.0
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DEN 123	Nutrition/Dental Health	2.0
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DEN 124	Periodontology	2.0
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DEN 130	Dental Hygiene Theory I	2.0
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DEN 131	Dental Hygiene Clinic I	3.0
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DEN 140	Dental Hygiene Theory II	1.0
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DEN 141	Dental Hygiene Clinic II	2.0
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DEN 220	Dental Hygiene Theory III	2.0
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DEN 221	Dental Hygiene Clinic III	4.0
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DEN 222	General & Oral Pathology	2.0
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DEN 223	Dental Pharmacology	2.0
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DEN 224	Materials and Procedures	2.0
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DEN 230	Dental Hygiene Theory IV	1.0
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DEN 231	Dental Hygiene Clinic IV	4.0
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DEN 232	Community Dental Health	3.0
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DEN 233	Professional Development	2.0
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BIO 168	Anatomy and Physiology I	4.0
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or BIO 165	Anatomy and Physiology I	
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Other Major Requirements:

DEN 125	Dental Office Emergencies	1.0
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BIO 169	Anatomy and Physiology II	4.0
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or BIO 166	Anatomy and Physiology II	
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Total Credits		76
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**No diplomas are offered in Dental Hygiene.**

**No certificates are offered in Dental Hygiene.**

## Diesel and Heavy Equipment Technology

The Diesel and Heavy Equipment Technology program prepares individuals for employment as entry-level transportation service technicians. The program provides an introduction to transportation industry careers and increases student awareness of the diverse technologies associated with this dynamic and challenging field. The degree program prepares individuals to apply technical knowledge and skills to repair, service, and maintain diesel engines in vehicles such as Heavy Duty Trucks over one ton classification, buses, ships, railroad locomotives, and equipment as well as stationary diesel engines in electrical generators and related equipment.

For specific information about potential positions and wages in Diesel and Heavy Equipment employment, visit the Central Piedmont Career Coach website.

## Diesel and Heavy Equipment Technology (A60460)

### General Education Requirements

ENG 111	Writing and Inquiry	3.0
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Select one of the following:		3.0
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ENG 112	Writing and Research in the Disciplines	
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ENG 113	Literature-Based Research	
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ENG 114	Professional Research & Reporting	
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Take 1 course:

COM 110	Introduction to Communication	3.0
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or COM 231	Public Speaking	
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Select 3 credits from the following: 3.0

MAT 110	Mathematical Measurement and Literacy
MAT 143	Quantitative Literacy
MAT 152	Statistical Methods I
MAT 171	Precalculus Algebra

Select one of the following: 3.0

ART 111	Art Appreciation
ART 114	Art History Survey I
ART 115	Art History Survey II
HUM 120	Cultural Studies
HUM 130	Myth in Human Culture
MUS 110	Music Appreciation
MUS 112	Introduction to Jazz
PHI 215	Philosophical Issues
PHI 240	Introduction to Ethics
REL 110	World Religions

Select one of the following: 3.0

ECO 251	Principles of Microeconomics
ECO 252	Principles of Macroeconomics
HIS 111	World Civilizations I
HIS 112	World Civilizations II
HIS 131	American History I
HIS 132	American History II
POL 120	American Government
PSY 150	General Psychology
SOC 210	Introduction to Sociology

**Major Requirements**

TRN 110	Introduction to Transport Technology	2.0
TRN 120	Basic Transportation Electricity	5.0
TRN 140	Transportation Climate Control	2.0
HET 110	Diesel Engines	6.0
HET 114	Power Trains	5.0
HET 125	Preventive Maintenance	2.0
TRN 170	Pc Skills for Transportation	2.0
TRN 180	Basic Welding for Transportation	3.0
HET 115	Electronic Engines	3.0
HET 128	Medium/Heavy Duty Tune Up	2.0
HET 230	Air Brakes	2.0
HET 231	Medium/Heavy Duty Brake Systems	2.0
HET 233	Suspension and Steering	4.0
HYD 110	Hydraulics/Pneumatics I	3.0

Select 8 credits from the following: 8.0

WBL 112	Work-Based Learning I
WBL 122	Work-Based Learning II
WBL 132	Work-Based Learning III
WBL 212	Work-Based Learning IV
HET 126	Preventive Maintenance Lab
HET 232	Medium/Heavy Duty Brake Systems Lab
HYD 134	Hydraulic/Hydrostatic Construction
HYD 210	Advanced Hydraulics
TRN 145	Advanced Transportation Electronics
TRN 180A	Basic Welding for Transportation Lab

TRN 140A	Transportation Climate Control Lab
TRN 120A	Basic Transportation Electrical Lab
ATT 130	Biofuels for Transportation
ATT 135	Gaseous Fuels for Transportation
ATT 150	Sustainable Transportation Technology

Total Credits 69

**Diesel and Heavy Equipment Technology Diplomas (D60460)**

**Diesel and Heavy Equipment Technology Diploma (D60460-D3)**

**General Education Requirements**

ENG 111	Writing and Inquiry	3.0
MAT 110	Mathematical Measurement and Literacy	3.0

**Major Requirements**

TRN 110	Introduction to Transport Technology	2.0
TRN 120	Basic Transportation Electricity	5.0
TRN 140	Transportation Climate Control	2.0
or TRN 145	Advanced Transportation Electronics	
TRN 170	Pc Skills for Transportation	2.0
HET 110	Diesel Engines	6.0
HET 114	Power Trains	5.0
HET 125	Preventive Maintenance	2.0
TRN 120A	Basic Transportation Electrical Lab	1.0
TRN 140A	Transportation Climate Control Lab	2.0
TRN 180	Basic Welding for Transportation	3.0
TRN 180A	Basic Welding for Transportation Lab	1.0
HET 126	Preventive Maintenance Lab	1.0
HET 230	Air Brakes	2.0
HET 233	Suspension and Steering	4.0
HYD 112	Hydraulics-Medium and Heavy Duty	2.0

Total Credits 46

**Diesel and Heavy Equipment Technology Certificates (C60460)**

- Diesel and Heavy Equipment Technology Certificate Specialization in Forklift Repair (C60460-C1) (p. 161)
- Diesel and Heavy Equipment Technology Certificate Specialization in Diesel Service Repair I (C60460-C3) (p. 162)
- Diesel and Heavy Equipment Technology Certificate Specialization in Diesel Service Repair II (C60460-C4) (p. 162)
- Diesel and Heavy Equipment Technology Certificate Specialization in Diesel Service Repair III (C60460-C5) (p. 162)

**Diesel and Heavy Equipment Technology Certificate Specialization in Forklift Repair (C60460-C1)**

**Major Requirements**

TRN 120	Basic Transportation Electricity	5.0
HET 110	Diesel Engines	6.0
HET 125	Preventive Maintenance	2.0
TRN 120A	Basic Transportation Electrical Lab	1.0

HET 126	Preventive Maintenance Lab	1.0
HYD 112	Hydraulics-Medium and Heavy Duty	2.0
Total Credits		17

### Diesel and Heavy Equipment Technology Certificate Specialization in Diesel Service Repair I (C60460-C3)

#### Major Requirements

TRN 110	Introduction to Transport Technology	2.0
TRN 140	Transportation Climate Control	2.0
HET 110	Diesel Engines	6.0
TRN 140A	Transportation Climate Control Lab	2.0
TRN 170	Pc Skills for Transportation	2.0
HET 231	Medium/Heavy Duty Brake Systems	2.0
HET 232	Medium/Heavy Duty Brake Systems Lab	1.0
Total Credits		17

### Diesel and Heavy Equipment Technology Certificate Specialization in Diesel Service Repair II (C60460-C4)

#### Major Requirements

TRN 140	Transportation Climate Control	2.0
TRN 140A	Transportation Climate Control Lab	2.0
TRN 180	Basic Welding for Transportation	3.0
TRN 180A	Basic Welding for Transportation Lab	1.0
HET 233	Suspension and Steering	4.0
WBL 112	Work-Based Learning I	2.0
Total Credits		14

### Diesel and Heavy Equipment Technology Certificate Specialization in Diesel Service Repair III (C60460-C5)

#### Major Requirements

HET 114	Power Trains	5.0
HET 125	Preventive Maintenance	2.0
HET 126	Preventive Maintenance Lab	1.0
HET 128	Medium/Heavy Duty Tune Up	2.0
HET 230	Air Brakes	2.0
HYD 110	Hydraulics/Pneumatics I	3.0
WBL 112	Work-Based Learning I	2.0
Total Credits		17

## Early Childhood Education

The Early Childhood Education program curriculum prepares individuals to work with children from infancy through middle childhood in diverse learning environments. Students combine learning theories with practice in actual settings with young children under the supervision of qualified teachers.

Coursework includes: child growth and development, physical/nutritional needs of children, care and guidance of children, and communication skills with parents and children. Students foster the cognitive/language,

physical/motor, social/emotional and creative development of young children.

Graduates are prepared to plan and implement developmentally appropriate programs in early childhood settings. Employment opportunities include child development and child care programs, preschools, public and private schools, recreational centers, Head Start Programs and school-age programs.

For specific information about potential positions and wages in Early Childhood Education employment, visit the Central Piedmont Career Coach website.

## Early Childhood Education (A55220AS)

### Degree Awarded

The Associate in Applied Science degree in Early Childhood Education is awarded by the college upon completion of this program.

### Admissions

1. Submit proof of high school graduation or equivalency.
2. Complete admissions application to Central Piedmont.
3. Complete or waive placement tests. Students with appropriate transcripts or official score reports can waive placement testing by meeting with a Central Piedmont academic advisor.
4. Consult with an academic advisor to declare program goals/major and be assigned to an Early Childhood faculty advisor.
5. Consult with an assigned Early Childhood faculty advisor.

### Program Accreditation

The Early Childhood Education Associate Degree program at Central Piedmont is accredited by the National Association for the Education of Young Children (NAEYC).

### State Credentials

All Early Childhood courses may be applied for training/education hours required by the North Carolina Division of Child Development and Early Education (NCDCDEE). Courses are offered for North Carolina Early Childhood, School-Age and Administrative Credentials.

### Four-Year Articulation Agreements

The Central Piedmont Early Childhood Education Program has articulation agreements other North Carolina institutions allowing students transferring to those schools to be eligible to enroll in the following programs:

#### Catawba College

Bachelor of Arts in Education (B.A.E.) degree through the Department of Teacher Education. Catawba College offers two concentrations in the B-K Education major: the Licensure concentration and the Non-Licensure concentration.

Students may transfer to any of the universities below to pursue the Bachelor Degree in Birth-Kindergarten Teaching with licensure option:

1. Appalachian State University
2. East Carolina University
3. Elizabeth City State University
4. Fayetteville State University
5. North Carolina Agricultural and Technical University
6. North Carolina Central University

7. University of North Carolina Charlotte
8. University of North Carolina Greensboro
9. University of North Carolina Pembroke
10. University of North Carolina Wilmington
11. Western Carolina University
12. Winston-Salem State University

Students may transfer to any of the universities below to pursue a Bachelor Degree in Early Childhood Non-teaching without the option of licensure. Universities are listed below with corresponding Bachelor Degree title:

1. East Carolina University: Family and Community Services, Child Development Concentration
2. Elizabeth City State University: Child, Family and Community
3. Fayetteville State University: Birth-Kindergarten Non-Teaching
4. North Carolina Agricultural and Technical University: Child Development and Family Studies
5. North Carolina Central University: Family Consumer Sciences, Child Development and Family Relations Concentration
6. University of North Carolina Greensboro: Early Care and Education  
Western Carolina University: Early Childhood
7. Winston-Salem State University: Early Intervention and Preschool Concentration or Business Optional Concentration

Students interested in transferring to higher education institutions should contact the admissions counselor at that individual school.

### General Course Information

1. Many courses have prerequisites or co-requisites; check the Courses section of this catalog for details.
2. 100-level EDU courses (with the exception of EDU 119) have a co-requisite of DRE 097.
3. 200-level EDU courses have a co-requisite of DRE 098.
4. For courses with a lab, students must register for the lab section as well as the lecture section. Ex. EDU 280 Language and Literacy Experiences and EDU 280A Language and Literacy Lab.
5. Students must have faculty permission to register for EDU 284.

### Contact Information

The Early Childhood Education program is in the Early Childhood Education Division. For more information, visit the Early Childhood webpage or call the Early Childhood Division at 704.330.4762. Email inquiries can be sent to [EarlyChildhoodEducation@cpcc.edu](mailto:EarlyChildhoodEducation@cpcc.edu).

#### General Education Requirements

ENG 111	Writing and Inquiry	3.0
SOC 210	Introduction to Sociology	3.0
COM 231	Public Speaking	3.0
Take 3 credits from the following:		3.0
ENG 112	Writing and Research in the Disciplines	
ENG 114	Professional Research & Reporting	
MAT 143	Quantitative Literacy	3.0
or MAT 110	Mathematical Measurement and Literacy	
Select 3 credits of the following:		3.0
ART 111	Art Appreciation	
ART 114	Art History Survey I	

ART 115	Art History Survey II	
MUS 110	Music Appreciation	
MUS 112	Introduction to Jazz	
PHI 215	Philosophical Issues	
PHI 240	Introduction to Ethics	

#### Major Requirements

EDU 119	Introduction to Early Childhood Education	4.0
EDU 131		3.0
EDU 146	Child Guidance	3.0
EDU 151	Creative Activities	3.0
EDU 153	Health, Safety and Nutrition	3.0
EDU 221	Children With Exceptionalities	3.0
EDU 280	Language and Literacy Experiences	3.0
EDU 284	Early Childhood Capstone Practicum	4.0
EDU 144	Child Development I	3.0
EDU 145	Child Development II	3.0
EDU 234	Infants, Toddlers, and Twos	3.0
EDU 251	Exploration Activities	3.0
EDU 151A	Creative Activities Lab	1.0
EDU 280A	Literacy Experiences Lab	1.0
EDU 251A	Exploration Activities Lab	1.0
EDU 259	Curriculum Planning	3.0
Select 5.0 credits from the following courses:		5.0

EDU 154	Social/Emotion/Behavior Development	
EDU 158	Healthy Lifestyles-Youth	
EDU 188	Issues in Early Childhood Education	
EDU 235	School-Age Development and Programs	
EDU 261	Early Childhood Administration I	
EDU 262	Early Childhood Administration II	
EDU 263	School-Age Program Administration	
EDU 288	Advanced Issues in Early Childhood Education	
EDU 216	Foundations of Education	
EDU 250	Teacher Licensure Preparation	
EDU 162	Observation and Assessment in Early Childhood Education	
EDU 254	Music and Movement for Children	
EDU 157	Active Play	
PSY 150	General Psychology	

Total Credits 67

### Early Childhood Education - Transfer Teacher Licensure Track (A55220BK)

#### General Education Requirements

ENG 111	Writing and Inquiry	3.0
COM 231	Public Speaking	3.0
PSY 150	General Psychology	3.0
MAT 143	Quantitative Literacy	3.0
Select 3.0 credits from the following courses:		3.0
ART 111	Art Appreciation	
ART 114	Art History Survey I	
ART 115	Art History Survey II	
MUS 110	Music Appreciation	



Programs of Study

MUS 112	Introduction to Jazz	
PHI 215	Philosophical Issues	
PHI 240	Introduction to Ethics	

**Transfer Speciality Areas**

Select one of the following courses: 3.0

ENG 112	Writing and Research in the Disciplines	
ENG 114	Professional Research & Reporting	

Select one of the following courses: 3.0

ECO 251	Principles of Microeconomics	
ECO 252	Principles of Macroeconomics	

Select one of the following courses: 4.0

HIS 111	World Civilizations I	
HIS 112	World Civilizations II	

Select one of the following courses: 4.0

HIS 131	American History I	
HIS 132	American History II	

Select one of the following courses: 4.0

POL 120	American Government	
SOC 210	Introduction to Sociology	

Select 4.0 credits from the following courses: 4.0

BIO 110	Principles of Biology	
BIO 111	General Biology I	

Select 4.0 credits from the following courses: 4.0

AST 111 & AST 151	Descriptive Astronomy and Descriptive Astronomy Lab and General Astronomy I and General Astronomy I Lab	
CHM 151	General Chemistry I	

Select 4.0 credits from the following courses: 4.0

GEL 111	Geology	
PHY 110 & PHY 110	Conceptual Physics and Conceptual Physics Lab	

**Major Requirements**

EDU 119	Introduction to Early Childhood Education	4.0
EDU 131		
EDU 144	Child Development I	3.0
EDU 145	Child Development II	3.0
EDU 146	Child Guidance	3.0
EDU 151	Creative Activities	3.0
EDU 151A	Creative Activities Lab	1.0
EDU 153	Health, Safety and Nutrition	3.0
EDU 221	Children With Exceptionalities	3.0
EDU 234	Infants, Toddlers, and Twos	3.0
EDU 280	Language and Literacy Experiences	3.0
EDU 280A	Literacy Experiences Lab	1.0
EDU 284	Early Childhood Capstone Practicum	4.0
EDU 216	Foundations of Education	3.0
EDU 250	Teacher Licensure Preparation	3.0

Total Credits 69

**Early Childhood Education - Transfer Non-Licensure Track (A55220NL)**

**General Education Requirements**

ENG 111	Writing and Inquiry	3.0
COM 231	Public Speaking	3.0
MAT 143	Quantitative Literacy	3.0
PSY 150	General Psychology	3.0

Select 3.0 credits from the following courses: 3.0

ART 111	Art Appreciation	
ART 114	Art History Survey I	

Select 3.0 credits from the following courses: 3.0

ART 115	Art History Survey II	
MUS 110	Music Appreciation	

Select 3.0 credits from the following courses: 3.0

MUS 112	Introduction to Jazz	
PHI 215	Philosophical Issues	
PHI 240	Introduction to Ethics	

Select 3.0 credits from the following courses: 3.0

ENG 112	Writing and Research in the Disciplines	
ENG 114	Professional Research & Reporting	

Select one of the following courses: 3.0

ECO 251	Principles of Microeconomics	
ECO 252	Principles of Macroeconomics	

Select one of the following courses: 4.0

HIS 111	World Civilizations I	
HIS 112	World Civilizations II	

Select one of the following courses: 4.0

HIS 131	American History I	
HIS 132	American History II	

Select one of the following courses: 4.0

POL 120	American Government	
SOC 210	Introduction to Sociology	

Take 4.0 credits from the following courses: 4.0

AST 111 & AST 151	Descriptive Astronomy and Descriptive Astronomy Lab and General Astronomy I and General Astronomy I Lab	
CHM 151	General Chemistry I	

Take 4.0 credits from the following courses: 4.0

GEL 111	Geology	
PHY 110 & PHY 110	Conceptual Physics and Conceptual Physics Lab	

Take 4.0 credits from the following courses: 4.0

EDU 119	Introduction to Early Childhood Education	4.0
EDU 131		

Take 3.0 credits from the following courses: 3.0

EDU 144	Child Development I	3.0
EDU 145	Child Development II	3.0

Take 3.0 credits from the following courses: 3.0

EDU 146	Child Guidance	3.0
EDU 151	Creative Activities	3.0

Take 1.0 credit from the following courses: 1.0

EDU 151A	Creative Activities Lab	1.0
EDU 153	Health, Safety and Nutrition	3.0

Take 3.0 credits from the following courses: 3.0

EDU 221	Children With Exceptionalities	3.0
EDU 234	Infants, Toddlers, and Twos	3.0

Take 3.0 credits from the following courses: 3.0

EDU 280	Language and Literacy Experiences	3.0
EDU 280A	Literacy Experiences Lab	1.0

Take 4.0 credits from the following courses: 4.0

EDU 284	Early Childhood Capstone Practicum	4.0
EDU 261	Early Childhood Administration I	3.0
EDU 262	Early Childhood Administration II	3.0

Total Credits 69

## No diplomas are offered in Early Childhood.

### Early Childhood Education Certificates (C55220)

- Early Childhood Education Certificate (p. 165) (C55220-C4)  
(p. 165) Specialization in Beginnings in Early Childhood Education -  
(p. 165) *For High School Juniors and Seniors Only*
- School-Age Care Certificate (C55450) (p. 165)
- Infant/Toddler Care Certificate (C55290) (p. 165)
- Early Childhood Administration (C55850) (p. 165)
- Early Childhood Preschool (C55860) (p. 165)

### Early Childhood Education Certificate Specialization in Beginnings in Early Childhood Education (For High School Juniors and Seniors Only) (C55220-C4)

#### Major Requirements

EDU 119	Introduction to Early Childhood Education	4.0
EDU 144	Child Development I	3.0
EDU 146	Child Guidance	3.0
EDU 153	Health, Safety and Nutrition	3.0
Total Credits		13

### School-Age Care Certificate (C55450)

#### Major Requirements

EDU 131		3.0
EDU 158	Healthy Lifestyles-Youth	3.0
EDU 235	School-Age Development and Programs	3.0
EDU 263	School-Age Program Administration	2.0
EDU 146	Child Guidance	3.0
EDU 145	Child Development II	3.0
Total Credits		17

### Infant/Toddler Care Certificate (C55290)

#### Major Requirements

EDU 119	Introduction to Early Childhood Education	4.0
EDU 144	Child Development I	3.0
EDU 131		3.0
EDU 153	Health, Safety and Nutrition	3.0
EDU 234	Infants, Toddlers, and Twos	3.0
Total Credits		16

### Early Childhood Administration (C55850)

#### Major Requirements

EDU 119	Introduction to Early Childhood Education	4.0
EDU 131		3.0
EDU 153	Health, Safety and Nutrition	3.0
EDU 261	Early Childhood Administration I	3.0
EDU 262	Early Childhood Administration II	3.0
Total Credits		16

### Early Childhood Preschool (C55860)

#### Major Requirements

EDU 119	Introduction to Early Childhood Education	4.0
EDU 131		3.0
EDU 145	Child Development II	3.0
EDU 146	Child Guidance	3.0
EDU 153	Health, Safety and Nutrition	3.0
Total Credits		16

## Electrical Engineering Technology

The Associate in Applied Science degree in Electrical Engineering Technology has been specifically designed to prepare individuals to become advanced technicians in the workforce.

Electrical Engineering Technicians (Associates degree holders) typically build, install, test, troubleshoot, repair, and modify developmental and production electronic components, equipment, and systems such as industrial/computer controls, manufacturing systems, instrumentation systems, communication systems, and power electronic systems.

A broad-based core of courses ensures that students develop the skills necessary to perform entry-level tasks. Emphasis is placed on developing the ability to think critically, analyze, and troubleshoot electronic systems. Beginning with electrical fundamentals, course work progressively introduces electronics, 2D Computer Aided Design (CAD), circuit simulation, solid-state fundamentals, digital concepts, instrumentation, C++ programming, microprocessors, programmable Logic Controllers (PLCs). Other course work includes the study of various fields associated with the electrical/electronic industry.

This degree program focuses on the knowledge and skills associated with the installation, maintenance, integration and troubleshooting of instrumentation and control systems. It is intended for workforce development to permit students to go directly into industry with this degree.

Graduates should qualify for employment as engineering assistants or as computer, electrical, or electronic technicians with job titles such as, electronics engineering technician, field service technician, maintenance technician, communications technician, electronic tester, electronic systems integrator, electrical and electronics repairers, electromechanical equipment assemblers, electrical drafter, electronics and instrumentation technician, control technician, bench technician, electric motor, power tool, and related repairers, or production control technician.

The AAS degree in Electrical Engineering Technology is accepted at some colleges and universities as the first two years of a bachelor's-level engineering technology program and graduates can transfer to a university program to finish a bachelor's degree; however there will be deficiencies.

The [Electronics Engineering Technology AAS Degree program](#) is designed for students planning to continue to a four-year bachelor's degree in engineering technology.

For specific information about potential positions and wages in Electrical Engineering Technology employment, visit the Central Piedmont Career Coach website.

## Electrical Engineering Technology (A40180)

### Degree Awarded

The Associate in Applied Science Degree - Electrical Engineering Technology is awarded by the College upon completion of the program.

### Program Accreditation

The Electrical Engineering Technology program at Central Piedmont is accredited by the Engineering Technology Accreditation Commission (TAC) of the Accreditation Board of Engineering and Technology (ABET).

### How to Apply:

Complete a Central Piedmont admissions application through Get Started on the Central Piedmont website.

### More Information:

For a printer-friendly version of this information, download the Electrical Engineering Technology Flyer or the Electrical Engineering Technology Program Educational Objectives under More Information on the Electrical Engineering Technology website.

Current departmental news is available at CEEET, the online Computer, Electrical and Electronics Engineering Technology Newsletter.

### Contact Information

For questions about the program or for assistance as a student in the program, contact faculty advising. The Electrical Engineering Technology program is in the Engineering Technology Division. For additional information, visit Engineering Technologies Division website or call the Program Chair at 704.330.6479.

#### General Education Requirements

ENG 111	Writing and Inquiry	3.0
Select one of the following:		3.0
ENG 112	Writing and Research in the Disciplines	
ENG 113	Literature-Based Research	
ENG 114	Professional Research & Reporting	
Select one of the following courses:		3.0
COM 110	Introduction to Communication	
COM 231	Public Speaking	
MAT 171	Precalculus Algebra	4.0
Select 3 credits of the following:		3.0
ART 111	Art Appreciation	
ART 114	Art History Survey I	
ART 115	Art History Survey II	
HUM 120	Cultural Studies	
HUM 130	Myth in Human Culture	
MUS 110	Music Appreciation	
MUS 112	Introduction to Jazz	
PHI 215	Philosophical Issues	
PHI 240	Introduction to Ethics	
REL 110	World Religions	
Select 3 credits of the following:		3.0
ECO 251	Principles of Microeconomics	
ECO 252	Principles of Macroeconomics	

HIS 111	World Civilizations I	
HIS 112	World Civilizations II	
HIS 131	American History I	
HIS 132	American History II	
POL 120	American Government	
PSY 150	General Psychology	
SOC 210	Introduction to Sociology	
<b>Major Requirements</b>		
ELN 133	Digital Electronics	4.0
ELC 231	Electric Power Systems	4.0
ELC 135	Electrical Machines	3.0
ELN 131	Analog Electronics I	4.0
ELN 260	Prog Logic Controllers	4.0
ELN 150	Computer-Aided Drafting for Electronics	2.0
Select one of the following:		4.0
ELC 138 & ELC 139	DC Circuit Analysis and AC Circuit Analysis	
ELC 131	Circuit Analysis I	
ELC 133	Circuit Analysis II	4.0
PCI 170	DAQ and Control	4.0
CSC 134	C++ Programming	3.0
ELN 232	Introduction to Microprocessors	4.0
Select 4 credits from the following:		4.0
PHY 151	College Physics I	
PHY 251	General Physics I	
MAT 172	Precalculus Trigonometry	4.0
WBL 112 or ISC 112	Work-Based Learning I Industrial Safety	2.0
Total Credits		69

## No diplomas are offered in Electrical Engineering Technology.

### Electrical Engineering Technology Certificates (C40180)

#### Electrical Engineering Technology with a Specialization in Electrical Engineering Technology Pathway(C40180-C5)

This certificate also is available to high school students dually enrolled in Career and College Promise.

#### General Education Requirements

MAT 121	Algebra/Trigonometry I	3.0
<b>Major Requirements</b>		
ELC 131	Circuit Analysis I	4.0
ELN 131	Analog Electronics I	4.0
ELN 133	Digital Electronics	4.0
Total Credits		15

### Electrical Systems Technology

This curriculum is designed to provide training for persons interested in the installation and maintenance of electrical systems found in residential,

commercial and industrial facilities. The Electrical Systems Technology (EST) curriculum is separated into three categories: Solar, Design and Manufacturing Automation Troubleshooting/Maintenance. The solar degree prepares graduates for a career in installation, electrical code (NEC), maintenance and design of solar equipment on a residential, commercial or larger industry level. The design degree prepares graduates for a career in the installation, design, estimating or testing of residential, commercial and industrial fields. The electrical manufacturing maintenance degree prepares graduates for a career in industries that require machine electrical repair skills on industrial and manufacturing machinery.

Coursework, most of which is hands-on, includes topics such as AC/DC theory, basic wiring practices, programmable logic controllers, industrial motor controls, applications of the National Electric Code and other subjects, as local needs require.

The program offers various certificates that focus on courses to obtain a specialization in solar, residential, industrial and manufacturing maintenance. Students also may complete certificate programs in HVAC controls and HVAC facilities maintenance, which are integrated within the Air Conditioning, Heating, and Refrigeration program.

For specific information about potential positions and wages in Electrical Systems, visit the Central Piedmont Career Coach website.

## Electrical Systems Technology (A35130) Degree Awarded

The Associate in Applied Science Degree – Electrical Systems Technology is awarded by the college upon completion of this program.

- Electrical Systems Technology - Electrical Design Track (A35130D) (p. 167)
- Electrical Systems Technology - Manufacturing Maintenance Technician Track (A35130M) (p. 167)
- Electrical Systems Technology - Solar Photovoltaic Track (A35130S) (p. 168)

## Admissions

- Completion of the high school diploma or equivalent is required.
- Many courses have prerequisites or co-requisites; check the Course Descriptions section for details.

## Contact Information

The Electrical Systems Technology program is in the Construction Technologies Division. For more information, call the program office at 704.330.4458 or the Construction Technologies Division at 704.330.4408.

## Electrical Systems Technology - Electrical Design Track (A35130D)

### General Education Requirements

ENG 111	Writing and Inquiry	3.0
ENG 112	Writing and Research in the Disciplines	3.0
COM 231	Public Speaking	3.0
Select one of the following:		3.0
MAT 110	Mathematical Measurement and Literacy	
MAT 143	Quantitative Literacy	
MAT 171	Precalculus Algebra	
Select one of the following:		3.0

ART 111	Art Appreciation	
ART 114	Art History Survey I	
ART 115	Art History Survey II	
HUM 120	Cultural Studies	
HUM 130	Myth in Human Culture	
MUS 110	Music Appreciation	
MUS 112	Introduction to Jazz	
PHI 215	Philosophical Issues	
PHI 240	Introduction to Ethics	
Select one of the following:		3.0
ECO 251	Principles of Microeconomics	
ECO 252	Principles of Macroeconomics	
HIS 111	World Civilizations I	
HIS 112	World Civilizations II	
HIS 131	American History I	
HIS 132	American History II	
POL 120	American Government	
PSY 150	General Psychology	
SOC 210	Introduction to Sociology	

### Major Requirements

ACA 118	College Study Skills	2.0
ARC 114	Architectural CAD	2.0
ARC 225	Architectural Building Information Modeling I	2.0
ELC 112	DC/AC Electricity	5.0
ELC 113	Residential Wiring	4.0
ELC 114	Commercial Wiring	4.0
ELC 115	Industrial Wiring	4.0
ELC 117	Motors and Controls	4.0
ELC 118	National Electrical Code	2.0
ELC 119	NEC Calculations	2.0
ELC 121	Electrical Estimating	2.0
ELC 125	Diagrams and Schematics	2.0
ELC 128	Introduction to Programmable Logic Controller	3.0
ELC 234	Electrical System Design	3.0
BPR 130	Print Reading-Construction	3.0
WOL 110	Basic Construction Skills	3.0
Select 3.0 credit from the following:		3.0
WBL 110	World of Work	
ARC 220	Advanced Architectural CAD	
WBL 111	Work-Based Learning I	
WBL 121	Work-Based Learning II	
ELC 111	Introduction to Electricity	
ELC 130	Advanced Motors and Controls	
ELC 215	Electrical Maintenance	
ELC 220	Photovoltaic System Technology	
ELC 228	Programmable Logic Controllers Applications	
AHR 110	Introduction to Refrigeration	
Total Credits		68



## Electrical Systems Technology - Manufacturing Maintenance Technician Track (A35130M)

### General Education Requirements

ENG 111	Writing and Inquiry	3.0
ENG 112	Writing and Research in the Disciplines	3.0
COM 231	Public Speaking	3.0
Select one of the following:		3.0

MAT 110	Mathematical Measurement and Literacy	
MAT 143	Quantitative Literacy	
MAT 171	Precalculus Algebra	

Select one of the following: 3.0

ART 111	Art Appreciation	
ART 114	Art History Survey I	
ART 115	Art History Survey II	
HUM 120	Cultural Studies	
HUM 130	Myth in Human Culture	
MUS 110	Music Appreciation	
MUS 112	Introduction to Jazz	
PHI 215	Philosophical Issues	
PHI 240	Introduction to Ethics	
REL 110	World Religions	

Select one of the following: 3.0

ECO 251	Principles of Microeconomics	
ECO 252	Principles of Macroeconomics	
HIS 111	World Civilizations I	
HIS 112	World Civilizations II	
HIS 131	American History I	
HIS 132	American History II	
POL 120	American Government	
PSY 150	General Psychology	
SOC 210	Introduction to Sociology	

### Major Requirements

ACA 118	College Study Skills	2.0
ARC 114	Architectural CAD	2.0
ARC 225	Architectural Building Information Modeling I	2.0
ELC 112	DC/AC Electricity	5.0
ELC 113	Residential Wiring	4.0
ELC 114	Commercial Wiring	4.0
ELC 117	Motors and Controls	4.0
ELC 118	National Electrical Code	2.0
ELC 119	NEC Calculations	2.0
ELC 121	Electrical Estimating	2.0
ELC 125	Diagrams and Schematics	2.0
ELC 128	Introduction to Programmable Logic Controller	3.0
ELC 130	Advanced Motors and Controls	3.0
ELC 215	Electrical Maintenance	3.0
ELC 228	Programmable Logic Controllers Applications	4.0
WOL 110	Basic Construction Skills	3.0
WLD 112	Basic Welding Processes	2.0
Select 3.0 credits from the following:		3.0
WBL 110	World of Work	
WBL 111	Work-Based Learning I	

WBL 121	Work-Based Learning II	
ELC 111	Introduction to Electricity	
ELC 115	Industrial Wiring	
ELC 220	Photovoltaic System Technology	
ELC 234	Electrical System Design	
BPR 130	Print Reading-Construction	
AHR 110	Introduction to Refrigeration	
Total Credits		70

## Electrical Systems Technology - Solar Photovoltaic Track (A35130S)

### General Education Requirements

ENG 111	Writing and Inquiry	3.0
ENG 112	Writing and Research in the Disciplines	3.0
COM 231	Public Speaking	3.0
Select one of the following:		3.0

MAT 110	Mathematical Measurement and Literacy	
MAT 143	Quantitative Literacy	
MAT 171	Precalculus Algebra	

Select one of the following: 3.0

ART 111	Art Appreciation	
ART 114	Art History Survey I	
ART 115	Art History Survey II	
HUM 120	Cultural Studies	
HUM 130	Myth in Human Culture	
MUS 110	Music Appreciation	
MUS 112	Introduction to Jazz	
PHI 215	Philosophical Issues	
PHI 240	Introduction to Ethics	
REL 110	World Religions	

Select one of the following: 3.0

ECO 251	Principles of Microeconomics	
ECO 252	Principles of Macroeconomics	
HIS 111	World Civilizations I	
HIS 112	World Civilizations II	
HIS 131	American History I	
HIS 132	American History II	
POL 120	American Government	
PSY 150	General Psychology	
SOC 210	Introduction to Sociology	

### Major Requirements

ACA 118	College Study Skills	2.0
ARC 114	Architectural CAD	2.0
ARC 225	Architectural Building Information Modeling I	2.0
ELC 112	DC/AC Electricity	5.0
ELC 113	Residential Wiring	4.0
ELC 114	Commercial Wiring	4.0
ELC 117	Motors and Controls	4.0
ELC 118	National Electrical Code	2.0
ELC 119	NEC Calculations	2.0
ELC 121	Electrical Estimating	2.0
ELC 125	Diagrams and Schematics	2.0

ELC 128	Introduction to Programmable Logic Controller	3.0
WOL 110	Basic Construction Skills	3.0
ELC 130	Advanced Motors and Controls	3.0
ELC 220	Photovoltaic System Technology	3.0
ELC 234	Electrical System Design	3.0
Select 3.0 credits from the following:		3.0
WBL 110	World of Work	
WBL 111	Work-Based Learning I	
WBL 121	Work-Based Learning II	
ELC 111	Introduction to Electricity	
ELC 115	Industrial Wiring	
ELC 215	Electrical Maintenance	
ELC 228	Programmable Logic Controllers Applications	
BPR 130	Print Reading-Construction	
AHR 110	Introduction to Refrigeration	
Total Credits		67

**No diplomas are offered in Electrical Systems Technology.**

**Electrical Systems Technology Certificates (C35130)**

The certificates listed below can be earned in the Electrical Systems Technology (A35130) program:

- Electrical Systems Technology Certificate Specialization in Fast Track Residential Wiring (C35130-30) (p. 169)
- Electrical Systems Technology Certificate Specialization in Fast Track Commercial and Industrial Wiring (C35130-31) (p. 169)
- Electrical Systems Technology Certificate Specialization in Electrician Assistant Level I (C35130-32) (p. 169)
- Electrical Systems Technology Certificate Specialization in Electrician Assistant Level II (C35130-33) (p. 169)
- Electrical Systems Technology Certificate Specialization in Electrical AHR Controls and Facilities Maintenance Level I (C35130-34) (p. 169)
- Electrical Systems Technology Certificate Specialization in Electrical AHR Controls and Facilities Maintenance Level II (C35130-35) (p. 170)
- Electrical Systems Technology Certificate Specialization in Solar Photovoltaic (C35130-36) (p. 168)
- Electrical Systems Technology Certificate Specialization in Electrical Manufacturing Maintenance Technician Level I (C35130-37) (p. 170)
- Electrical Systems Technology Certificate Specialization in Electrical Manufacturing Maintenance Technician Level II (35130-38) (p. 170)
- Electrical Systems Technology Certificate Specialization in Fast Track Electrical Construction (C35130-54) (p. 170)

**Admissions**

- Completion of a high school diploma or equivalent is required as the foundation of a career in this area.
- Many courses have prerequisites or co-requisites; check the Course Descriptions section for details.

**Contact Information**

The Electrical Systems Technology program is in the Construction Technologies Division. For more information, call the program office at 704.330.4458 or the Construction Technologies Division at 704.330.4408.

**Electrical Systems Technology Certificate Specialization in Fast Track Residential Wiring (C35130-30)**

**Major Requirements**

ELC 112	DC/AC Electricity	5.0
ELC 113	Residential Wiring	4.0
ELC 118	National Electrical Code	2.0
ELC 119	NEC Calculations	2.0
BPR 130	Print Reading-Construction	3.0
Total Credits		16

**Electrical Systems Technology Certificate Specialization in Fast Track Commercial and Industrial Wiring (C35130-31)**

**Major Requirements**

ELC 112	DC/AC Electricity	5.0
ELC 114	Commercial Wiring	4.0
ELC 118	National Electrical Code	2.0
ELC 119	NEC Calculations	2.0
ELC 115	Industrial Wiring	4.0
Total Credits		17

**Electrical Systems Technology Certificate Specialization in Electrician Assistant Level I (C35130-32)**

**Major Requirements**

ELC 118	National Electrical Code	2.0
ELC 119	NEC Calculations	2.0
ELC 113	Residential Wiring	4.0
ELC 112	DC/AC Electricity	5.0
ARC 225	Architectural Building Information Modeling I	2.0
WOL 110	Basic Construction Skills	3.0
Total Credits		18

**Electrical Systems Technology Certificate Specialization in Electrician Assistant Level II (C35130-33)**

**Major Requirements**

ELC 234	Electrical System Design	3.0
ELC 114	Commercial Wiring	4.0
ELC 115	Industrial Wiring	4.0
ARC 114	Architectural CAD	2.0
BPR 130	Print Reading-Construction	3.0
WBL 111M	Work-Based Learning I Experience	1.0
Total Credits		17

### Electrical Systems Technology Certificate Specialization in Electrical AHR Controls and Facilities Maintenance Level I (C35130-34)

Major Requirements

AHR 110	Introduction to Refrigeration	5.0
BPR 130	Print Reading-Construction	3.0
ELC 111	Introduction to Electricity	3.0
ELC 115	Industrial Wiring	4.0
ELC 125	Diagrams and Schematics	2.0
Total Credits		17

### Electrical Systems Technology Certificate Specialization in Electrical AHR Controls and Facilities Maintenance Level II (C35130-35)

AHR 130	HVAC Controls	3.0
AHR 215	Commercial HVAC Controls	2.0
AHR 263	Energy Management	2.0
ELC 117	Motors and Controls	4.0
ELC 128	Introduction to Programmable Logic Controller	3.0
ELC 228	Programmable Logic Controllers Applications	4.0
Total Credits		18

### Electrical Systems Technology Certificate Specialization in Solar Photovoltaic (C35130-36)

Major Requirements

ELC 112	DC/AC Electricity	5.0
ELC 118	National Electrical Code	2.0
ELC 119	NEC Calculations	2.0
ELC 220	Photovoltaic System Technology	3.0
Total Credits		12

### Electrical Systems Technology Certificate Specialization in Electrical Manufacturing Maintenance Technician Level I (C35130-37)

Major Requirements

ELC 112	DC/AC Electricity	5.0
ELC 117	Motors and Controls	4.0
ELC 125	Diagrams and Schematics	2.0
ELC 128	Introduction to Programmable Logic Controller	3.0
WLD 121	GMAW (MIG) FCAW/Plate	4.0
Total Credits		18

### Electrical Systems Technology Certificate Specialization in Electrical Manufacturing Maintenance Technician Level II (C35130-38)

Major Requirements

ELC 130	Advanced Motors and Controls	3.0
ELC 215	Electrical Maintenance	3.0
ELC 228	Programmable Logic Controllers Applications	4.0
ELC 234	Electrical System Design	3.0
WOL 110	Basic Construction Skills	3.0

WLD 112	Basic Welding Processes	2.0
Total Credits		18

### Electrical Systems Technology Certificate Specialization in Fast Track Electrical Construction (C35130-54)

Major Requirements

ELC 112	DC/AC Electricity	5.0
ELC 113	Residential Wiring	4.0
ELC 114	Commercial Wiring	4.0
ELC 118	National Electrical Code	2.0
ELC 119	NEC Calculations	2.0
WBL 121M	Work-Based Learning II	1.0
Total Credits		18

## Electronics Engineering Technology

The Associate in Applied Science degree in Electronics Engineering Technology is accepted at some colleges and universities as the first two years of a bachelor's-level engineering technology program. This program is specifically designed to ease the transition for students planning to join the Bachelor of Science in Engineering Technology (BSET) program at UNC Charlotte, but it also can be applied to many other universities. A BSET graduate is known as a technologist.

Electronics Engineering Technicians (associate degree holders) typically build, install, test, troubleshoot, repair, and modify developmental and production electronic components, equipment, and systems such as industrial/computer controls, manufacturing systems, instrumentation systems, communication systems, and power electronic systems.

Emphasis is placed on developing the ability to think critically, analyze, and troubleshoot electronic systems. Beginning with electrical fundamentals, course work progressively introduces electronics, circuit simulation, solid-state fundamentals, digital concepts, instrumentation, C++ programming, microprocessors, programmable Logic Controllers (PLCs). Course work includes setup and maintenance of instrumentation devices, PIDs, Programmable Logic Controllers (PLCs), LabVIEW programming, C++, and microprocessors. Other course work includes the study of various fields associated with the electrical/electronic industry.

Complete details, including a flowchart showing a typical schedule of classes per semester for this program, is found on the Electronics Engineering Technology website.

This program is intended for university transfer but also can be used to gain employment after graduation. The Electrical Engineering Technology AAS Degree program is designed as workforce development for immediate employment. Graduates also may seek employment as technicians, engineering assistants, field service engineers, electrical and electronics repairers, electromechanical equipment assemblers, electronics and instrumentation technician, or salespersons in electrical generation/distribution, industrial maintenance, automation, electronic repair or other fields requiring a broad-based knowledge of electrical and electronic concepts.

For specific information about potential positions and wages in Electronics Engineering Technology employment, visit the Central Piedmont Career Coach website.

## Electronics Engineering Technology (A40200)

### Degree Awarded

The Associate in Applied Science degree - Electronics Engineering Technology is awarded by the college upon completion of the program.

### Program Accreditation

The Electronics Engineering Technology program at Central Piedmont is accredited by the Engineering Technology Accreditation Commission of the Accreditation Board of Engineering and Technology (TAC of ABET), abet.org.

### How to Apply

Visit Get Started on the home page of the Central Piedmont website to apply.

### More Information

For a printer-friendly version of this information, download the Electronics Engineering Technology Flyer or the Electronics Engineering Technology Program Educational Objectives found under More Information on the Electronics Engineering Technology web page.

Current departmental news is available at CEEET, the online Computer, Electrical and Electronics Engineering Technology Newsletter

If you are in this program or have questions about this program please contact our faculty for advising.

The Electronics Engineering Technology program is in the Engineering Technology Division. For additional information, visit the Engineering Technologies website or call the Engineering Technology Division at 704.330.6860.

#### General Education Requirements

ENG 111	Writing and Inquiry	3.0
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Select 1 of the following:	3.0
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ENG 112	Writing and Research in the Disciplines	
or ENG 113	Literature-Based Research	
or ENG 114	Professional Research & Reporting	

Select 1 of the following:	3.0
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COM 110	Introduction to Communication	
or COM 231	Public Speaking	

Select 1 of the following:	3.0
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ART 111	Art Appreciation	
or ART 114	Art History Survey I	
or ART 115	Art History Survey II	
or HUM 120	Cultural Studies	
or HUM 130	Myth in Human Culture	
or MUS 110	Music Appreciation	
or MUS 112	Introduction to Jazz	
or PHI 215	Philosophical Issues	
or PHI 240	Introduction to Ethics	

or REL 110	World Religions	
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Select 1 of the following:	3.0
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ECO 251	Principles of Microeconomics	
or ECO 252	Principles of Macroeconomics	
or HIS 111	World Civilizations I	
or HIS 112	World Civilizations II	
or HIS 131	American History I	
or HIS 132	American History II	
or POL 120	American Government	
or PSY 150	General Psychology	
or SOC 210	Introduction to Sociology	

MAT 171	Precalculus Algebra	4.0
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#### Major Requirements

ELC 133	Circuit Analysis II	4.0
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ELN 131	Analog Electronics I	4.0
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ELN 133	Digital Electronics	4.0
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ELN 232	Introduction to Microprocessors	4.0
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ELN 260	Prog Logic Controllers	4.0
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Select 1 of following two groups:	4.0
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Group 1:

ELC 131	Circuit Analysis I	
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Group 2:

ELC 138	DC Circuit Analysis	
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ELC 139	AC Circuit Analysis	
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#### Other Major Requirements:

CSC 134	C++ Programming	3.0
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PCI 170	DAQ and Control	4.0
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PHY 151	College Physics I	4.0
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or PHY 251	General Physics I	
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PHY 152	College Physics II	4.0
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or PHY 252	General Physics II	
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MAT 172	Precalculus Trigonometry	4.0
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MAT 271	Calculus I	4.0
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EGR 110	Introduction to Engineering Technology	2.0
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Total Credits	68
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## No diplomas are offered in Electronics Engineering Technology.

## No certificates are offered in Electronics Engineering Technology.

## Emergency Management

### Pending State Approval

The Emergency Management curriculum is designed to provide students with a foundation of technical and professional knowledge needed for emergency services delivery in local and state government agencies. Study involves both management and technical aspects of law enforcement, fire protection, emergency medical services, and emergency planning. Coursework includes classroom and laboratory exercised to introduce the student to various aspects of emergency preparedness, protection, and enforcement. Students will learn technical and administrative skills such as investigative principles, hazardous



materials, code, standards, emergency agency operations, and finance. Employment opportunities include ambulance services, fire/rescue agencies, law enforcement agencies, fire marshal offices, industrial firms, educational institutions, emergency management offices, and other government agencies. Employed persons should have opportunities for skills and supervisory-level positions.

## Emergency Management (A55460)

*Pending state approval*

### General Education Requirements

ENG 111	Writing and Inquiry	3.0
Select one of the following:		3.0
ENG 112	Writing and Research in the Disciplines	
ENG 113	Literature-Based Research	
ENG 114	Professional Research & Reporting	
Select one of the following:		3.0
MAT 110	Mathematical Measurement and Literacy	
MAT 121	Algebra/Trigonometry I	
MAT 143	Quantitative Literacy	
MAT 152	Statistical Methods I	
MAT 171	Precalculus Algebra	
MAT 172	Precalculus Trigonometry	
MAT 271	Calculus I	
Select one of the following:		3.0
COM 110	Introduction to Communication	
COM 231	Public Speaking	
Select one of the following:		3.0
ART 111	Art Appreciation	
ART 114	Art History Survey I	
ART 115	Art History Survey II	
HUM 120	Cultural Studies	
HUM 130	Myth in Human Culture	
MUS 110	Music Appreciation	
MUS 112	Introduction to Jazz	
PHI 215	Philosophical Issues	
PHI 240	Introduction to Ethics	
REL 112	Western Religions	
Section one of the following:		3.0
ECO 251	Principles of Microeconomics	
ECO 252	Principles of Macroeconomics	
HIS 111	World Civilizations I	
HIS 112	World Civilizations II	
HIS 131	American History I	
HIS 132	American History II	
POL 120	American Government	
PSY 150	General Psychology	
SOC 210	Introduction to Sociology	

### Major Requirements 21.0

EPT 120		
EPT 130		
EPT 140	Emergency Management	
EPT 210		
EPT 220		

EPT 275		
EPT 228		
<b>Incident Management</b>		
Select one of the following:		3.0
CJC 170	Critical Incident Mgmt for Public Safety	
EPT 150		
<b>Law and Ethics Select One of The Following</b>		3.0
FIP 152	Fire Protection Law	
EPT 124		
<b>Other Major Hours Select 19 Hours From The Following</b>		19.0
CIS 110	Introduction to Computers	
CJC 160	Terrorism: Underlying Issues	
CJC 161	Introduction to Homeland Security	
CJC 215	Organization & Administration	
CJC 162	Intelligence Analysis and Security Management	
CJC 212	Ethics & Community Relations	
CJC 232	Civil Liability	
FIP 248	Fire Service Personnel Administration	
FIP 276	Managing Fire Services	
FIP 256	Municipal Public Relations	
Total Credits		64

**No diplomas are offered in Emergency Management.**

**No certificates are offered in Emergency Management.**

## Emergency Medical Science

The Emergency Medical Science curriculum is designed to prepare graduates for careers as entry-level paramedics. The program can provide students with an associate degree, thus allowing them to advance their emergency medical services (EMS) careers.

The curriculum is divided into two paths: traditional and bridge

1. Traditional path: Students that have no EMS background.
2. Bridge path: Currently credentialed paramedics

While in the program, students acquire basic and advanced life support knowledge and skills in cutting edge learning environments including classroom and laboratory instruction. Students have unique hospital clinical opportunities at a regional level one trauma center. The field internship portion is completed at one of the nation's top EMS providers.

The core EMS curriculum focuses on EMS management, rescue operations management and methods of EMS education, giving graduates experience in all facets of EMS leadership.

Students who successfully complete the program are eligible for North Carolina and National Paramedic certification examinations.

Employment opportunities include: Emergency Medical Services (EMS) agencies, fire and rescue agencies, critical care transport services, special events, and government agencies.

For specific information about potential positions and wages in Emergency Medical Science employment, visit the Central Piedmont Career Coach website.

## Emergency Medical Science (A45340)\*

### Degree Awarded

The Associate of Applied Science Degree - Emergency Medical Science is awarded by the college upon completion of this program.

### Admissions

- A high school diploma or equivalent is required.
- Central Piedmont placement tests are required in English and mathematics. Developmental Studies for English and mathematics classes are available for students to build basic skills and knowledge.
- Consult with advisement counselor and attend an orientation session following placement testing.
- Meet with an EMS program advisor prior to initial registration.
- Many courses have prerequisites or co-requisites; check the Courses section for details.

### Contact Information

The Emergency Medical Science Program is in the Public Safety Division of Central Piedmont. For more information, contact the Program Chair by phone at 704.330.2722, ext. 3274 or by email at [emergency.medicalservices@cpcc.edu](mailto:emergency.medicalservices@cpcc.edu).

#### General Education Requirements

Required Course:		
ENG 111	Writing and Inquiry	3.0
Research English		
Take 3 credits:		3.0
ENG 112	Writing and Research in the Disciplines	
ENG 113	Literature-Based Research	
ENG 114	Professional Research & Reporting	
Communication		
Take 3 credits:		3.0
COM 110	Introduction to Communication	
COM 231	Public Speaking	
Humanities and Fine Arts		
Take 3 credits:		3.0
ART 111	Art Appreciation	
ART 114	Art History Survey I	
ART 115	Art History Survey II	
HUM 120	Cultural Studies	
HUM 130	Myth in Human Culture	
MUS 110	Music Appreciation	
MUS 112	Introduction to Jazz	
PHI 215	Philosophical Issues	
PHI 240	Introduction to Ethics	
REL 110	World Religions	
Behavioral/Social Sciences		
Take 3 credits:		3.0
PSY 150	General Psychology	
SOC 210	Introduction to Sociology	

Mathematics		
Take 3 credits:		3.0
MAT 143	Quantitative Literacy	
MAT 152	Statistical Methods I	
MAT 171	Precalculus Algebra	

<b>Major Requirements</b>		
Required Courses		
EMS 110	EMT	9.0
BIO 163	Basic Anatomy & Physiology	5.0
Medical Terminology		
MED 120	Survey of Medical Terminology	2.0
Paramedic		
EMS 122	EMS Clinical Practicum I	1.0
EMS 130	Pharmacology	4.0
EMS 131	Advanced Airway Management	2.0
EMS 160	Cardiology I	3.0
EMS 220	Cardiology II	3.0
EMS 221	EMS Clinical Practicum II	2.0
EMS 231	EMS Clinical Practicum III	3.0
EMS 240	Patients With Special Challenges	2.0
EMS 241	EMS Clinical Practicum IV	4.0
EMS 250	Medical Emergencies	4.0
EMS 260	Trauma Emergencies	2.0
EMS 270	Life Span Emergencies	4.0
EMS 285	EMS Capstone	2.0
Select 4.0 credits from the following:		4.0
EMS 125	EMS Instructor Methodology	
EMS 150	Emergency Vehicles and EMS Communication	
EMS 235	EMS Management	
EMS 140	Rescue Scene Management	
EMS 280	EMS Bridging Course	

Total Credits 74

**No diplomas are offered in Emergency Medical Science.**

**No certificates are offered in Emergency Medical Science.**

## Fire Protection Technology

The Fire Protection Technology curriculum is designed to provide individuals with technical and professional knowledge to make decisions regarding fire protection for both public and private sectors. It also provides a sound foundation for continuous higher learning in fire protection, administration and management.

Course work includes classroom and laboratory exercises to introduce the student to various aspects of fire protection. Students learn technical and administrative skills such as hydraulics, hazardous materials, arson investigation, fire protection safety, fire suppression management, law and code.

Graduates should qualify for employment in governmental agencies, industrial firms, insurance rating organizations, educational organizations

and municipal fire departments. Employees should have opportunities for skilled and supervisory level positions within their current organizations.

For specific information about potential positions and wages in Fire Protection employment, visit the Central Piedmont Career Coach website.

## Fire Protection Technology (A55240)

### Degree Awarded

The Associate in Applied Science degree - Fire Protection Technology is awarded by the college upon completion of the program.

### Admissions

- A high school diploma or equivalent is required.
- Placement tests are required for admission to particular courses.
- Many courses have prerequisites or co-requisites; check the Courses section for details.

### Notes

- A minimum grade of "C" is required in all FIP prefix courses for successful completion of the program.
- Students may obtain a suggested course sequence list from the program chair.
- Students should meet with a Fire Protection Program faculty advisor prior to initial registration.

### Contact Information

The Fire Protection Technology program is a part of the Public Safety Division. For more information, call 704.330.4619 or email [fire.protection@cpcc.edu](mailto:fire.protection@cpcc.edu).

#### General Education Requirements

ENG 111	Writing and Inquiry	3.0
PSY 150	General Psychology	3.0
Take 3 credits from the following:		3.0
ENG 112	Writing and Research in the Disciplines	
ENG 113	Literature-Based Research	
	or ENG 114 Professional Research & Reporting	
Take 3 credits from the following:		3.0
MAT 143	Quantitative Literacy	
MAT 152	Statistical Methods I	
MAT 171	Precalculus Algebra	
MAT 271	Calculus I	
COM 110	Introduction to Communication	3.0
	or COM 231 Public Speaking	
Take 3 credits from the following:		3.0
ART 111	Art Appreciation	
ART 114	Art History Survey I	
ART 115	Art History Survey II	
HUM 120	Cultural Studies	
HUM 130	Myth in Human Culture	
MUS 110	Music Appreciation	
MUS 112	Introduction to Jazz	
PHI 215	Philosophical Issues	
PHI 240	Introduction to Ethics	
REL 110	World Religions	

#### Major Requirements

FIP 120	Introduction to Fire Protection	3.0
FIP 124	Fire Prevention & Public Education	3.0
FIP 132	Building Construction	3.0
FIP 152	Fire Protection Law	3.0
FIP 220	Fire Fighting Strategies	3.0
FIP 228	Local Government Finance	3.0
Select 4 credits of the following:		4.0
FIP 230	Chemistry of Hazardous Materials I	
CHM 151	General Chemistry I	
PHY 151	College Physics I	
Take 1 course from the following:		4.0
FIP 231	Chemistry of Hazardous Materials II	
CHM 152	General Chemistry II	
PHY 152	College Physics II	

#### Major Electives

Select 18 credits of the following:		18.0
FIP 128	Detection and Investigation	
FIP 136	Inspections and Codes	
FIP 140	Industrial Fire Protection	
FIP 146	Fire Protection Systems	
FIP 221	Advanced Fire Fighting Strategies	
FIP 224	Fire Instructor I & II	
FIP 226	Fire Officer I & II	
FIP 229	Fire Dynamics and Combustion	
FIP 240	Fire Service Supervision	
FIP 248	Fire Service Personnel Administration	
FIP 256	Municipal Public Relations	
FIP 276	Managing Fire Services	
FIP 277	Fire and Social Behavior	
EPT 140	Emergency Management	
WBL 111	Work-Based Learning I	
WBL 112	Work-Based Learning I	
ACA 111	College Student Success	
ACA 122	College Transfer Success	
COM 140	Introduction to Intercultural Communication	
Take 1 course:		
CIS 111	Basic PC Literacy	2.0
	or CIS 110 Introduction to Computers	

Total Credits 64

## No diplomas are offered in Fire Protection Technology.

### Fire Protection Technology Certificates (C55240)

- Fire Protection Technology Certificate Specialization in Fire Management (C55240-C1) (p. 175)
- Fire Protection Technology Certificate Specialization in Basics in Fire Protection (C55240-C2) (p. 175)
- Fire Protection Technology Certificate Specialization in Firefighting Strategy and Tactics (C55240-C3) (p. 175)

- Fire Protection Technology Certificate Specialization in Global Studies in Fire Protection (C55240-C4) (p. 175)

### Fire Protection Technology Certificate Specialization in Fire Management (C55240-C1)

**Major Requirements**

FIP 240	Fire Service Supervision	3.0
FIP 248	Fire Service Personnel Administration	3.0
FIP 256	Municipal Public Relations	3.0
EPT 140	Emergency Management	3.0
Total Credits		12

### Fire Protection Technology Certificate Specialization in Basics in Fire Protection (C55240-C2)

FIP 120	Introduction to Fire Protection	3.0
FIP 124	Fire Prevention & Public Education	3.0
FIP 128	Detection and Investigation	3.0
FIP 220	Fire Fighting Strategies	3.0
FIP 140	Industrial Fire Protection	3.0
Total Credits		15

### Fire Protection Technology Certificate Specialization in Firefighting Strategy and Tactics (C55240-C3)

FIP 132	Building Construction	3.0
FIP 220	Fire Fighting Strategies	3.0
FIP 221	Advanced Fire Fighting Strategies	3.0
FIP 224	Fire Instructor I & II	4.0
Total Credits		13

### Fire Protection Technology Certificate Specialization in Global Studies in Fire Protection (C55240-C4)

**Major Requirements**

FIP 120	Introduction to Fire Protection	3.0
FIP 124	Fire Prevention & Public Education	3.0
FIP 132	Building Construction	3.0
REL 110	World Religions	3.0
Total Credits		12

## Geomatics Technology

The Geomatics Technology curriculum provides training for technicians in the many areas of geomatics and surveying. Surveyors are involved in land surveying, route surveying, construction surveying, photogrammetry, mapping, Global Positioning Systems (GPS), Geographic Information Systems (GIS) and other areas of property description and measurements. GIS Technicians make and interpret maps for a variety of purposes; they also digitize, collect and maintain GIS data. Analysts maintain GIS databases and manipulate spatial data to illustrate relationships that might otherwise be difficult to visualize.

Course work includes the communication and computational skills required for boundary, construction, route and control surveying, photogrammetry,

topography, drainage, surveying law, subdivision design, cartography and spatial analysis, with emphasis upon applications of electronic data collection and related software including CAD and ArcGIS.

Graduates should qualify for jobs as survey party chief, instrument person, surveying technician, highway surveyor, mapper, GPS technician, CAD operator, GIS Technician or Analyst. Graduates are prepared to pursue the requirements necessary to become a Professional Land Surveyor in North Carolina.

For specific information about potential positions and wages in Geomatics employment, visit the Central Piedmont Career Coach website.

## Geomatics Technology (A40420)

### Degree Awarded

The Associate in Applied Science Degree - Geomatics Technology is awarded by the college upon completion of this program.

### Admissions

- A high school diploma or equivalent is required.
- Central Piedmont placement tests are required in English and mathematics. Developmental classes in English and mathematics courses are available for students to build basic skills and knowledge.
- Attend an orientation session and consult with an advising counselor regarding course placement after placement testing.
- Consult with a Geomatics Technology Faculty Advisor before course registration.
- Many courses have prerequisites or co-requisites; check the Courses section for details.

### Note

Students who do not take program-related courses for a one year period must reenter the program under the Catalog in effect at the time of reentry.

### Contact Information

The Geomatics Technology program is in the Engineering Technology Division. For more information, call the Program Chair, Fred Gore, at 704.330.6895, or visit the Engineering Technologies website.

**General Education Requirements**

ENG 111	Writing and Inquiry	3.0
ENG 114	Professional Research & Reporting	3.0
COM 110	Introduction to Communication	3.0
or COM 231	Public Speaking	

Select 3 credits of the following: 3.0

MAT 121	Algebra/Trigonometry I	
MAT 171	Precalculus Algebra	
MAT 271	Calculus I	

Select 3 credits of the following: 3.0

ART 111	Art Appreciation	
ART 114	Art History Survey I	
ART 115	Art History Survey II	
HUM 120	Cultural Studies	
HUM 130	Myth in Human Culture	
MUS 110	Music Appreciation	
MUS 112	Introduction to Jazz	



PHI 215	Philosophical Issues	
PHI 240	Introduction to Ethics	
REL 110	World Religions	
Select 3 credits of the following:		3.0
ECO 251	Principles of Microeconomics	
ECO 252	Principles of Macroeconomics	
HIS 111	World Civilizations I	
HIS 112	World Civilizations II	
HIS 131	American History I	
HIS 132	American History II	
POL 120	American Government	
PSY 150	General Psychology	
SOC 210	Introduction to Sociology	
<b>Major Requirements</b>		
CEG 115	Intro to Tech & Sustainability	3.0
SRV 110	Surveying I	4.0
CEG 211	Hydrology & Erosion Control	3.0
CEG 151	Cad for Engineering Technology	3.0
SRV 111	Surveying II	4.0
SRV 210	Surveying III	4.0
SRV 220	Surveying Law	3.0
CEG 230	Subdivision Planning & Design	3.0
SRV 240	Topo/Site Surveying	4.0
GIS 111	Introduction to GIS	3.0
GIS 112	Introduction to GPS	3.0
GIS 121	Georeferencing & Mapping	3.0
GIS 240	Air Photo Interpretation	3.0
GIS 225	Advanced Methods in GIS	3.0
<b>Technical Electives</b>		
Select 4.0 credits from the following:		4.0
WBL 112E	Work-Based Learning I Experience	
SRV 260	Field & Office Practices	
GIS 221	Advanced Topics in GIS	
Total Credits		68

## No diplomas are offered in Geomatics Technology.

### Geomatics Technology Certificates (C40420)

- Geomatics Technology Certificate Specialization in Geomatics Technology Pathway(C40420-C6) (p. 176)
- Geomatics Tehnology Certificate Specialization in Geospatial Fundamentals (C40420-C7) (p. 176)

### Geomatics Technology Certificate Specialization in Geomatics Technology Pathway(C40420-C6)

This certificate is intended for high school juniors and seniors enrolled in a Career Technical Education Pathway. Course work includes: fundamental mathematics, principles of Plane Surveying, principles of Route Surveying, principles of Hydrology and basic study of Geographic Information

Systems. All course work may be applied toward an Associate in Applied science Degree – Geomatics Technology.

#### General Education Requirements

<b>Major Requirements</b>		
SRV 110	Surveying I	4.0
CEG 115	Intro to Tech & Sustainability	3.0
MAT 121	Algebra/Trigonometry I	3.0
GIS 111	Introduction to GIS	3.0
CEG 151	Cad for Engineering Technology	3.0
Total Credits		16

### Geomatics Technology Certificate Specialization in Geospatial Fundamentals (C40420-C7)

#### Certificate Awarded

A certificate is awarded in Mapping upon completion of this program.

#### Admissions

- Completion of a high school diploma or equivalent is required.
- Central Piedmont placement test is required in mathematics. Developmental courses are available for students to build basic skills and knowledge.
- Many courses have prerequisites; check the Courses section of the catalog for details.

#### Contact Information

The Geomatics Technology program is in the Engineering Technologies Division. For more information, call the Program Chair at 704.330.6895.

#### Major Requirements

GIS 111	Introduction to GIS	3.0
GIS 112	Introduction to GPS	3.0
GIS 121	Georeferencing & Mapping	3.0
GIS 225	Advanced Methods in GIS	3.0
GIS 240	Air Photo Interpretation	3.0
Total Credits		15

## Graphic Arts and Imaging Technology

The Graphics Arts and Imaging Technology curriculum is designed to provide students with knowledge and skills necessary for employment in the printing, publishing, packaging and related industries.

Students receive hands-on training in computer publishing, imaging technology, offset lithography, screen printing, flexography and emerging printing technologies.

Graduates should qualify for career opportunities within the printing, publishing and packaging industries.

For specific information about potential positions and wages in Graphic Arts and Imaging employment, visit the Central Piedmont Career Coach website.

# Graphic Arts and Imaging Technology (A30180)

## Degree Awarded

The Associate in Applied Science degree-Graphic Arts and Imaging Technology is awarded by the college upon completion of this program.

## Admissions

- A high school diploma or equivalent is required.
- Submit high school transcripts and any college transcripts.
- Placement testing in English, mathematics and reading is required to qualify for ENG 111 and college-level math. Scores on placement tests may require students to take specified Developmental Studies courses. If required, completion of these courses is necessary prior to program admission. Students may, with approval of the program chair, take no more than two pre-admission courses during their first semester of program admission.
- Students must demonstrate proficiency in computer operation equivalent to or higher than CIS 110 before admission.
- Many courses have prerequisites or co-requisites; check the Courses section for details.

## Notes

Students must furnish required hand tools for the program. A list of these items can be obtained from the program chair or instructors.

## Contact Information

The Graphic Arts and Imaging Technology program is in the Technical Careers Division. For more information, call the program office at 704.330.4425 or contact the program chair at 704.330.4427. For suggested course sequence, contact Graphic Arts and Imaging Technology instructors or program counselors through the program office.

### General Education Requirements

ENG 111	Writing and Inquiry	3.0
COM 110	Introduction to Communication	3.0
	or COM 231 Public Speaking	
Take 3 credits from the following:		3.0
ENG 112	Writing and Research in the Disciplines	
ENG 113	Literature-Based Research	
ENG 114	Professional Research & Reporting	
Take 1 course from the following:		3.0
MAT 110	Mathematical Measurement and Literacy	
MAT 143	Quantitative Literacy	
Select 3 credits of the following:		3.0
ART 111	Art Appreciation	
ART 114	Art History Survey I	
ART 115	Art History Survey II	
HUM 120	Cultural Studies	
HUM 130	Myth in Human Culture	
MUS 110	Music Appreciation	
MUS 112	Introduction to Jazz	
PHI 215	Philosophical Issues	
PHI 240	Introduction to Ethics	
REL 110	World Religions	

Select 3 credits of the following:		3.0
ECO 251	Principles of Microeconomics	
ECO 252	Principles of Macroeconomics	
HIS 111	World Civilizations I	
HIS 112	World Civilizations II	
HIS 131	American History I	
HIS 132	American History II	
POL 120	American Government	
PSY 150	General Psychology	
SOC 210	Introduction to Sociology	

### Major Requirements

GRA 121	Graphic Arts I	4.0
GRA 221	Graphic Arts II	4.0
GRA 151	Computer Graphics I	2.0
GRA 152	Computer Graphics II	2.0
GRA 153	Computer Graphics III	2.0
GRA 255	Image Manipulation I	2.0
GRA 256	Image Manipulation II	2.0
GRD 141	Graphic Design I	4.0
PRN 155	Screen Printing I	2.0
PRN 131	Flexography I	4.0
WBL 111	Work-Based Learning I	1.0

### Technical Electives

Select 20 credits from the following:		20.0
ACA 111	College Student Success	
GRA 222	Graphic Arts III	
GRA 154	Computer Graphics IV	
GRA 140	Graphic Arts Imaging	
GRA 110	Graphic Arts Orientation	
PRN 156	Screen Printing II	
WBL 112	Work-Based Learning I	
PRN 171	Introduction to Brand Protection and Anti-Counterfeiting Technology	
PRN 271	Graphic Imaging for Brand Protection and Anti-Counterfeiting Technology	
PRN 272	Brand Protection and Anti-Counterfeiting Technology Implementation	
WBL 122	Work-Based Learning II	
BUS 110	Introduction to Business	
BUS 139	Entrepreneurship I	
MKT 120	Principles of Marketing	
CIS 110	Introduction to Computers	

Total Credits 67

## Graphic Arts and Imaging Technology Flexography Concentration (A3018A)

Flexography is a concentration under the Graphic Arts and Imaging Technology curriculum. This curriculum is designed to allow students to gain further study into the flexographic printing production process.

Students produce jobs for labels, tags, boards, packaging and corrugated jobs found in segments of the flexographic industry. Students concentrate

## Programs of Study

on color reproduction and produce products while understanding the limitations within the production process.

Graduates should qualify for career opportunities within the printing, publishing and packaging industries.

## Degree Awarded

The Associate in Applied Science-Graphic and Imaging Technology/Flexography degree is awarded by the college upon completion of this program.

## Admissions

- A high school diploma or equivalent is required.
- Submit high school transcripts and any college transcripts.
- Placement testing in English, mathematics and reading is required to qualify for ENG 111 and college-level math. Scores on placement tests may require students to take specified Developmental Studies courses. If required, completion of these courses is necessary prior to program admission. Students may, with approval of the program chair, take no more than two pre-admission courses during their first semester of program admission.
- Students must demonstrate proficiency in computer operations equivalent to or higher than CIS 110 before admission.
- Many courses have prerequisites or co-requisites; check the Courses section for details.

## Notes

Students must furnish required hand tools for program. A list of these items can be obtained from the program chair or instructors.

## Contact Information

Graphic and Imaging Technology Flexography is in the Technical Careers Division. For more information, call 704.330.4425 or 704.330.4427. See Graphic Arts and Imaging Technology Program instructors or program counselors for suggested sequence of courses.

### General Education Requirements

ENG 111	Writing and Inquiry	3.0
Select one of the following:		3.0
ENG 112	Writing and Research in the Disciplines	
ENG 113	Literature-Based Research	
ENG 114	Professional Research & Reporting	
Select one of the following:		3.0
MAT 110	Mathematical Measurement and Literacy	
MAT 143	Quantitative Literacy	
Select one of the following:		3.0
COM 110	Introduction to Communication	
COM 231	Public Speaking	
Select 3 credits of the following:		3.0
ART 111	Art Appreciation	
ART 114	Art History Survey I	
ART 115	Art History Survey II	
HUM 120	Cultural Studies	
HUM 130	Myth in Human Culture	
MUS 110	Music Appreciation	
MUS 112	Introduction to Jazz	

PHI 215	Philosophical Issues	
PHI 240	Introduction to Ethics	
REL 110	World Religions	
Select 3 credits of the following:		3.0
ECO 251	Principles of Microeconomics	
ECO 252	Principles of Macroeconomics	
HIS 111	World Civilizations I	
HIS 112	World Civilizations II	
HIS 131	American History I	
HIS 132	American History II	
POL 120	American Government	
PSY 150	General Psychology	
SOC 210	Introduction to Sociology	
<b>Major Requirements</b>		
GRA 121	Graphic Arts I	4.0
GRA 221	Graphic Arts II	4.0
GRA 151	Computer Graphics I	2.0
GRA 152	Computer Graphics II	2.0
GRA 153	Computer Graphics III	2.0
GRA 255	Image Manipulation I	2.0
GRA 256	Image Manipulation II	2.0
GRD 141	Graphic Design I	4.0
PRN 131	Flexography I	4.0
PRN 132	Flexography II	4.0
PRN 231	Flexography III	4.0
PRN 232	Flexography IV	4.0
PRN 241	Flexo Applications I	4.0
PRN 242	Flexo Applications II	4.0
WBL 111	Work-Based Learning I	1.0
<b>Technical Electives</b>		
Select 8.0 credits from the following:		8.0
PRN 155	Screen Printing I	
GRA 110	Graphic Arts Orientation	
GRA 140	Graphic Arts Imaging	
PRN 156	Screen Printing II	
GRA 222	Graphic Arts III	
PRN 171	Introduction to Brand Protection and Anti-Counterfeiting Technology	
PRN 271	Graphic Imaging for Brand Protection and Anti-Counterfeiting Technology	
PRN 272	Brand Protection and Anti-Counterfeiting Technology Implementation	
GRA 154	Computer Graphics IV	
BUS 110	Introduction to Business	
WBL 112	Work-Based Learning I	
WBL 122	Work-Based Learning II	
BUS 139	Entrepreneurship I	
MKT 120	Principles of Marketing	
CIS 110	Introduction to Computers	

Total Credits 73

## No diplomas are offered in Graphics Arts and Imaging Technology.

### Graphic Arts and Imaging Technology Certificates (C30180)

- Graphic Arts and Imaging Technology Certificate Specialization in Screen Printing Company Ownership (C30180-14) (p. 179)
- Graphic Arts and Imaging Technology Certificate Specialization in Brand Protection and Anti-Counterfeiting Technology (C30180-20) (p. 179)

#### Graphic Arts and Imaging Technology Certificate Specialization in Screen Printing Company Ownership (C30180-14)

**Major Requirements:**

PRN 156	Screen Printing II	2.0
GRA 153	Computer Graphics III	2.0
GRA 255	Image Manipulation I	2.0
BUS 139	Entrepreneurship I	3.0
GRA 221	Graphic Arts II	4.0
Total Credits		13

#### Graphic Arts and Imaging Technology Certificate Specialization in Brand Protection and Anti-Counterfeiting Technology (C30180-20)

**Major Requirements**

GRA 121	Graphic Arts I	4.0
PRN 131	Flexography I	4.0
PRN 171	Introduction to Brand Protection and Anti-Counterfeiting Technology	2.0
PRN 271	Graphic Imaging for Brand Protection and Anti-Counterfeiting Technology	2.0
PRN 272	Brand Protection and Anti-Counterfeiting Technology Implementation	3.0
Total Credits		15

This certificate program is designed to educate individuals looking to enter into the security printing industry. This program will include important topics geared toward understanding how counterfeiting is impacting world trade and what technologies are in place to deter brand infringement. Students will learn the many ways a brand can be impacted by criminals. They will gain the skills required to develop and implement a plan of protection for a brand. Students who complete this certificate will understand the legal aspects and scope of counterfeiting, be knowledgeable in the technologies designed to combat counterfeiting, and be able to develop a plan of protection for a brand to reduce infringement to their intellectual property.

## Health Information Technology

The Health Information Technology curriculum prepares individuals with the knowledge and skills to process, analyze, abstract, compile, maintain, manage and report health information. Graduates will

- supervise department functions,
- classify, code and index diagnoses and procedures,

- coordinate information for cost control, quality management, statistics, marketing and planning,
- monitor governmental and non-governmental standards,
- facilitate research,
- design system controls to monitor patient information security, and
- work with electronic health records and other technology as it becomes available.

Graduates of this program may be eligible to write the national certification examination to become a Registered Health Information Technician (RHIT). Employment opportunities include: hospitals, rehabilitation facilities, nursing homes, health insurance organizations, out-patient clinics, physicians' offices, hospice, mental health facilities, IT departments working with electronic health records, and electronic health record vendors.

For specific information about potential positions and wages in Health Information employment, visit the Central Piedmont Career Coach website.

## Health Information Technology (A45360)

### Program Accreditation

The Health Information Technology program at Central Piedmont is accredited by the Commission on Accreditation for Health Informatics and Information Management Education (CAHIIM).

### Admissions

- A high school diploma or equivalent is required for program admission.
- Complete an Admissions Application to Central Piedmont.
- Submit official high school transcripts and any official college transcripts (if applicable) to the Central Piedmont Student Records Office.
- Complete required placement testing.
- Meet with an academic advisor or counselor for preliminary counseling and interpretation of placement test scores.
- Take the Test of Essential Academic Skills (TEAS)
- This curriculum may be completed on a part-time or full-time basis. For more information, visit the Health Information Technology website.
- Attend a HIT Program Information Session prior to admission to the program. Visit the program website listed above for dates and times.
- Complete the HIT Program Admission Packet located at the program website link above.
- Upon admission to the program, students must take all courses as scheduled and sequenced.
- Progression in this program is dependent on satisfying course prerequisites, co-requisites and maintaining a grade of "C" or better for all courses in the curriculum.
- BIO 168, BIO 169, CIS 110, DBA 112, MED 121, and MED 122 must have been completed within the five years previous to registration for a HIT course for which they are prerequisites or co-requisites.
- Students re-entering the HIT program must successfully re-take any HIT courses taken five or more years prior to the re-entry point.
- Many courses have prerequisites or co-requisites; check the Courses section for details.
- In order to participate in Professional Practice Experiences at health care facilities, students are required to submit results of a North



Carolina state or national criminal background check at their own expense.

- Students must complete a medical exam, drug test, provide record of immunizations, show proof of medical insurance, and carry Central Piedmont accident insurance. The student is responsible for the cost of medical exams, drug tests, immunizations, insurance and criminal background checks.

## Notes

- The Health Information Technology Program is offered entirely online with the exception of Professional Practice Experience courses. Professional Practice Experience sites must be geographically accessible to our faculty to insure adequate supervision.
- In addition to tuition and textbooks, there are program-related costs. Professional Practice Experience courses requires a physical examination (including drug testing), updated immunizations and criminal background checks. Professional Practice Experience courses require travel to health care facilities that may be at a distance from the student's home.

## Contact Information

The Health Information Technology Program is in the Health Sciences Division. For more information, visit the Health Information Technology website. For further assistance, contact the Health Sciences Admissions Clerk at 704.330.6958.

### General Education Requirements

ENG 111	Writing and Inquiry	3.0
PSY 150	General Psychology	3.0
Select 3 credits of the following:		3.0
ENG 112	Writing and Research in the Disciplines	
ENG 113	Literature-Based Research	
ENG 114	Professional Research & Reporting	
COM 110	Introduction to Communication	3.0
or COM 231	Public Speaking	
Select 3 credits of the following:		3.0
MAT 110	Mathematical Measurement and Literacy	
MAT 143	Quantitative Literacy	
Select 3 credits of the following:		3.0
ART 111	Art Appreciation	
ART 114	Art History Survey I	
ART 115	Art History Survey II	
HUM 120	Cultural Studies	
HUM 130	Myth in Human Culture	
MUS 110	Music Appreciation	
MUS 112	Introduction to Jazz	
PHI 215	Philosophical Issues	
PHI 240	Introduction to Ethics	

### Major Requirements

HIT 110	Fundamentals of Health Information Management	3.0
HIT 112	Health Law and Ethics	3.0
HIT 114	Health Data Systems and Standards	3.0
HIT 210	Healthcare Statistics	3.0
HIT 214	CPT/Other Coding Systems	2.0
HIT 211	ICD Coding	4.0

HIT 216	Quality Management	2.0
HIT 280	Professional Issues	2.0
MED 121	Medical Terminology I	3.0
MED 122	Medical Terminology II	3.0
HIT 226	Principles of Disease	3.0
HIT 218	Management Principles in HIT	3.0
BIO 168	Anatomy and Physiology I	4.0
BIO 169	Anatomy and Physiology II	4.0
HIT 122	Professional Practice Experience I	1.0
HIT 124	Professional Practice Experience II	1.0
HIT 222	Prof Practice Exp III	2.0
CIS 110	Introduction to Computers	3.0
DBA 112	Database Utilization	3.0
HIT 215	Reimbursement Methodology	2.0

### Technical Electives

Take 2 credits of the following:		2.0
HIT 220	Health Informatics & EHRs	
HIT 221	Lifecycle of Electronic Health Record	
HIT 225	Healthcare Informatics	
HIT 227	Informatics Project Management	

Total Credits 74

## No diplomas are offered in Health Information Technology.

## Health Information Technology Certificate (C45360-C6)

### Specialization in Practice Workflow & Information Management Redesign Specialist

This certificate is designed to prepare professionals for Health IT EHR workflow and design. Coursework includes fundamentals of healthcare, electronic health records, health care informatics and project management.

Employees in this role assist in reorganizing the work of a healthcare provider to take full advantage of health IT features and meaningful use of health IT to improve health and care.

### Major Requirements

HIT 110	Fundamentals of Health Information Management	3.0
HIT 114	Health Data Systems and Standards	3.0
HIT 216	Quality Management	2.0
HIT 221	Lifecycle of Electronic Health Record	3.0
HIT 225	Healthcare Informatics	4.0
HIT 227	Informatics Project Management	3.0
Total Credits		18

## Horticulture Technology

The Horticulture Technology curriculum is designed to prepare individuals for various careers in horticulture. Classroom instruction and practical laboratory applications of horticultural principles and practices are included in the program of study.

Coursework includes plant science, plant materials, propagation, soils, fertilizers and pest management. Horticulture Technology is a program that focuses on

- the general production and management of cultivated plants, shrubs, flowers, foliage, trees, ground covers and related plant materials,
- the management of technical and business operations connected with horticultural services, and
- the basic science principles needed to understand plants and their management and care.

Also included are courses in plant production, landscaping and the management and operation of horticulture businesses.

Graduates should qualify for employment opportunities in nurseries, garden centers, greenhouses, landscape operations, gardens and governmental agencies. Graduates also should be prepared to take the following exams:

1. the North Carolina Certified Plant Professional Exam,
2. the licensed pesticide applicators exam, and
3. the ISA (International Society of Arboriculture) certified arborist exam.

For specific information about potential positions and wages in Horticulture employment, visit the Central Piedmont Career Coach website.

## Horticulture Technology (A15240)

### Degree Awarded

The Associate in Applied Science - Horticulture Technology is awarded by the college upon completion of this program.

### Admissions

- A high school diploma or equivalent (available through Central Piedmont ) is required.
- Central Piedmont placement tests are required in English and mathematics. Developmental Studies mathematics and English courses are available for students to build basic skills and knowledge.
- Consult with an Advisement Counselor and attend an orientation session after placement testing.
- Many courses have prerequisites or co-requisites; check the Courses section for details.

### Contact Information

The Horticulture Technology program is in the Professional Careers Division. For more information, contact the Program Chair at 704.330.4826.

#### General Education Requirements

ENG 111	Writing and Inquiry	3.0
Select 3 credits of the following:		3.0
ENG 112	Writing and Research in the Disciplines	
ENG 113	Literature-Based Research	
ENG 114	Professional Research & Reporting	
Select 3 credits of the following:		3.0
COM 110	Introduction to Communication	
COM 231	Public Speaking	
Select 3 credits of the following:		3.0
MAT 110	Mathematical Measurement and Literacy	

MAT 143	Quantitative Literacy	
MAT 152	Statistical Methods I	
MAT 171	Precalculus Algebra	
Select 3 credits of the following:		3.0
ART 111	Art Appreciation	
ART 114	Art History Survey I	
ART 115	Art History Survey II	
HUM 120	Cultural Studies	
HUM 130	Myth in Human Culture	
MUS 110	Music Appreciation	
MUS 112	Introduction to Jazz	
PHI 215	Philosophical Issues	
PHI 240	Introduction to Ethics	
REL 110	World Religions	
Select 3 credits of the following:		3.0
ECO 251	Principles of Microeconomics	
ECO 252	Principles of Macroeconomics	
HIS 111	World Civilizations I	
HIS 112	World Civilizations II	
HIS 131	American History I	
HIS 132	American History II	
POL 120	American Government	
PSY 150	General Psychology	
SOC 210	Introduction to Sociology	
SOC 213	Sociology of the Family	

#### Major Requirements

HOR 112	Landscape Design I	3.0
HOR 116	Landscape Management I	3.0
HOR 124	Nursery Operations	3.0
HOR 134	Greenhouse Operations	3.0
HOR 160	Plant Materials I	3.0
HOR 161	Plant Materials II	3.0
HOR 162	Applied Plant Science	3.0
HOR 164	Horticultural Pest Management	3.0
HOR 166	Soils and Fertilizers	3.0
HOR 168	Plant Propagation	3.0
HOR 253	Horticulture Turfgrass	3.0
HOR 257	Arboriculture Practices	2.0
HOR 273	Horticultural Management & Marketing	3.0
CIS 111	Basic PC Literacy	2.0
WBL 111	Work-Based Learning I	1.0
SPA 120	Spanish for the Workplace	3.0

#### Technical Electives

Select 12 credits of the following:		12.0
AGR 121	Biological Pest Management	
AGR 140	Agricultural Chemicals	
HOR 114	Landscape Construction	
HOR 118	Equipment Operation and Maintenance	
HOR 142	Fruit & Vegetable Production	
HOR 154	Introduction to Horticulture Therapy	
HOR 170	Horticultural Computer Applications	
HOR 213	Landscape Design II	

HOR 215	Landscape Irrigation
HOR 217	Landscape Management II
HOR 218	Advanced Equipment Operations and Maintenance
HOR 225	Nursery Production
HOR 235	Greenhouse Production
HOR 245	Horticultural Specialty Crops
HOR 251	Insects & Diseases
HOR 255	Interiorscapes
HOR 257	Arboriculture Practices
HOR 265	Advanced Plant Materials
HOR 268	Advanced Propagation
HOR 293	
SEL 291	Selected Topics in _____
TRF 110	Introduction Turfgrass Cultivation & Id And Identification
TRF 130	Native Flora ID
TRF 152	Landscape Maintenance
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Total Credits	74

## No diplomas are offered in Horticulture Technology.

### Horticulture Technology Certificates (C15240)

- Horticulture Technology Certificate with a Specialization in Landscape Design (C15240-C1) (p. 182)
- Horticulture Technology Certificate with a Specialization in Horticulture Maintenance (C15240-C5) (p. 182)
- Horticulture Technology Certificate with a Specialization in Plant Production (C15240-C6) (p. 182)
- Horticulture Technology Certificate with a Specialization in Horticulture (C15240-C7) (p. 182)
- Horticulture Technology Certificate with a Specialization in Landscape Maintenance (C15240-C8) (p. 182)
- Horticulture Technology Certificate with a Specialization in Urban Agriculture (C15240-C9) (p. 183)

### Horticulture Technology Certificate with a Specialization in Landscape Design (C15240-C1)

This certificate is designed to prepare individuals for horticultural careers in the specialized area of landscape design. Coursework includes plant materials, design, graphics and landscape computer applications.

#### Major Requirements

HOR 160	Plant Materials I	3.0
HOR 213	Landscape Design II	3.0
HOR 112	Landscape Design I	3.0
HOR 161	Plant Materials II	3.0
HOR 170	Horticultural Computer Applications	2.0
HOR 265	Advanced Plant Materials	2.0
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Total Credits		16

### Horticulture Technology Certificate with a Specialization in Horticulture Maintenance (C15240-C5)

This certificate is designed to prepare individuals for horticultural careers in maintaining landscape and turf areas. Coursework includes plant materials, pest management and landscape and turfgrass management.

#### Major Requirements

HOR 116	Landscape Management I	3.0
HOR 164	Horticultural Pest Management	3.0
HOR 118	Equipment Operation and Maintenance	2.0
or HOR 257	Arboriculture Practices	
HOR 160	Plant Materials I	3.0
or HOR 161	Plant Materials II	
HOR 253	Horticulture Turfgrass	3.0
or TRF 110	Introduction Turfgrass Cultivation & Id And Identification	
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Total Credits		14

### Horticulture Technology Certificate with a Specialization in Plant Production (C15240-C6)

This certificate is designed to prepare individuals for horticultural careers as growers of nursery and greenhouse crops. Coursework includes plant materials, pest management, propagation and the operation of nurseries and greenhouses.

#### Major Requirements

HOR 124	Nursery Operations	3.0
HOR 134	Greenhouse Operations	3.0
HOR 164	Horticultural Pest Management	3.0
HOR 168	Plant Propagation	3.0
HOR 161	Plant Materials II	3.0
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Total Credits		15

### Horticulture Technology Certificate Specialization in Horticulture (C15240-C7)

This program also is available to high school students through the Career and College Promise program.

#### Major Requirements

HOR 160	Plant Materials I	3.0
HOR 162	Applied Plant Science	3.0
HOR 166	Soils and Fertilizers	3.0
HOR 168	Plant Propagation	3.0
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Total Credits		12

### Horticulture Technology Certificate Specialization in Landscape Maintenance (C15240-C8)

This program also is available to high school students through the Career and College Promise program.

#### Major Requirements

HOR 160	Plant Materials I	3.0
HOR 162	Applied Plant Science	3.0

HOR 166	Soils and Fertilizers	3.0
HOR 168	Plant Propagation	3.0
HOR 253	Horticulture Turfgrass	3.0
TRF 152	Landscape Maintenance	3.0
Total Credits		18

### Horticulture Technology Certificate with a Specialization in Urban Agriculture (C15240-C9)

This program also is available to high school students through the Career and College Promise program.

HOR 134	Greenhouse Operations	3.0
HOR 142	Fruit & Vegetable Production	2.0
HOR 164	Horticultural Pest Management	3.0
HOR 168	Plant Propagation	3.0
HOR 166	Soils and Fertilizers	3.0
Total Credits		14

## Hospitality Management

The Hospitality Management curriculum prepares individuals to understand and apply the administrative and practical skills needed for supervisory and managerial positions in hotels, motels, resorts, inns, restaurants, institutions and clubs.

Course work includes guest services, leadership, management, restaurant operations, lodging operations, marketing, sanitation, food preparation, food and beverage management and other critical areas.

Graduates should qualify for management or entry-level supervisory positions in food and lodging operations, including restaurants, foodservice, beverage service, catering, front office, reservations and housekeeping. Opportunities are also available in product services and technology support and sales.

For specific information about potential positions and wages in Hospitality Management employment, visit the Central Piedmont Career Coach website.

### Hospitality Management (A25110)

#### Degree Awarded

The Associate in Applied Science Degree – Hospitality Management is awarded by the college upon completion of this program.

#### Admissions

- Complete an admissions application to Central Piedmont .
- Submit an official high school diploma, as well as college transcripts, to Admissions, Records & Registration.
- Take placement tests in English, reading and mathematics.
- Complete all needed developmental studies courses prior to beginning CUL, HRM, and BPA prefix courses.
- Make an appointment for consultation with an academic advisor.
- Make an appointment for consultation with the Hospitality Management Program Chair, Richard Spellman, 704.330.6669.

- Many courses have prerequisites or co-requisites; check the Courses section for details.
- Students must have a CUL, HRM, or BPA program code.

#### Notes

- Progression in this program is dependent upon a score of “C” or better in all courses with CUL, HRM, and BPA prefixes.
- All CUL and BPA lab classes require student accident medical insurance.

#### Contact Information

The Hospitality Management program is in the Hospitality Education Division. For more information, call 704.330.6669.

#### General Education Requirements

ENG 111	Writing and Inquiry	3.0
Select 3 credits of the following:		3.0

ENG 112	Writing and Research in the Disciplines	
ENG 113	Literature-Based Research	
ENG 114	Professional Research & Reporting	

Select 3 credits of the following: 3.0

COM 110	Introduction to Communication	
COM 231	Public Speaking	

Select 3 credits of the following: 3.0

MAT 121	Algebra/Trigonometry I	
MAT 143	Quantitative Literacy	
MAT 152	Statistical Methods I	
MAT 171	Precalculus Algebra	
MAT 271	Calculus I	

Select 3 credits of the following: 3.0

ART 111	Art Appreciation	
ART 114	Art History Survey I	
ART 115	Art History Survey II	
HUM 120	Cultural Studies	
HUM 130	Myth in Human Culture	
MUS 110	Music Appreciation	
MUS 112	Introduction to Jazz	
PHI 215	Philosophical Issues	
PHI 240	Introduction to Ethics	
REL 110	World Religions	

Select 3 credits of the following: 3.0

ECO 251	Principles of Microeconomics	
ECO 252	Principles of Macroeconomics	
HIS 111	World Civilizations I	
HIS 112	World Civilizations II	
HIS 131	American History I	
HIS 132	American History II	
POL 120	American Government	
PSY 150	General Psychology	
SOC 210	Introduction to Sociology	

#### Major Requirements

HRM 110	Introduction to Hospitality and Tourism	3.0
HRM 120	Front Office Procedures	3.0
HRM 140	Legal Issues-Hospitality	3.0



## Programs of Study

HRM 150	Training for Hospitality	3.0
HRM 210	Meetings and Event Planning	3.0
HRM 220	Cost Control-Food and Beverage	3.0
HRM 225	Beverage Management	3.0
HRM 230	Club & Resort Management	3.0
HRM 240	Marketing for Hospitality	3.0
HRM 245	Human Resource Management-Hospitality	3.0
HRM 280	Management Problems-Hospitality	3.0
CUL 110	Sanitation and Safety	2.0
CUL 111	Success in Hospitality Studies	1.0
CUL 135	Food and Beverage Service	2.0
CUL 135A	Food and Beverage Service Lab	1.0
CUL 273	Career Development	1.0
ACC 120	Principles of Financial Accounting	4.0
or ACC 115	College Accounting	
CIS 111	Basic PC Literacy	2.0
WBL 112	Work-Based Learning I	2.0
HRM 275	Leadership-Hospitality	3.0
Total Credits		69

## Hospitality Management Diplomas (D25110)

Diplomas earned in the Hospitality Management Program (A25110) are awarded by the college upon successful completion of the program and can be applied toward the Hospitality Management Degree Program.

### Admissions

- Complete an admissions application to Central Piedmont .
- Submit an official high school diploma as well as college transcripts to the Admission, Records & Registration.
- Take placement tests in English, reading and mathematics.
- Complete all needed developmental studies courses prior to beginning CUL, HRM and BPA prefix courses.
- Make an appointment for consultation with an academic advisor.
- Make an appointment for consultation with the Hospitality Management Program Chair, Richard Spellman, 704.330.6669.
- Many courses have prerequisites or co-requisites; check the Courses section for details.
- Students must have a CUL, HRM, or BPA program code.

### Notes

- Progression in this program is dependent upon a score of "C" or better in all courses with CUL, HRM and BPA prefixes.
- All CUL and BPA lab classes require student accident medical insurance.

### Contact Information

The Hospitality Management program is in the Hospitality Education Division. For more information, call 704.330.6669.

### Hotel Management Diploma (D25110-D1)

This curriculum prepares students to understand and apply the administrative and practical skills needed for supervisory and managerial positions in the hotel industry. Course work includes front office

management, guest services, sanitation, quality management, law, marketing and other areas critical to the success of hospitality professionals. Upon completion graduates should qualify for supervisory or entry-level management positions in lodging including front office, reservations and marketing.

### Diploma Awarded

A diploma in Hotel Management is awarded by the college upon completion of this program.

#### General Education Requirements

ENG 111	Writing and Inquiry	3.0
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Select 3 credits of the following: 3.0

MAT 121	Algebra/Trigonometry I	
MAT 143	Quantitative Literacy	
MAT 152	Statistical Methods I	
MAT 171	Precalculus Algebra	
MAT 271	Calculus I	

Select 3 credits of the following: 3.0

COM 110	Introduction to Communication	
COM 231	Public Speaking	

#### Major Requirements

CUL 110	Sanitation and Safety	2.0
HRM 110	Introduction to Hospitality and Tourism	3.0
HRM 140	Legal Issues-Hospitality	3.0
HRM 240	Marketing for Hospitality	3.0
HRM 245	Human Resource Management-Hospitality	3.0
HRM 280	Management Problems-Hospitality	3.0
HRM 120	Front Office Procedures	3.0
WBL 112	Work-Based Learning I	2.0
HRM 210	Meetings and Event Planning	3.0
CIS 111	Basic PC Literacy	2.0
HRM 230	Club & Resort Management	3.0
HRM 150	Training for Hospitality	3.0
CUL 111	Success in Hospitality Studies	1.0
CUL 273	Career Development	1.0
Total Credits		44

### Restaurant Management Diploma (D25110-D2)

This curriculum prepares students to understand and apply administrative and practical skills needed for supervisory and managerial positions in the restaurant industry. Course work includes law, food and beverage service, food preparation, guest services, sanitation, quality management and other areas critical to the success of hospitality professionals. Upon completion graduates should qualify for supervisory or entry-level dining room management positions.

### Diploma Awarded

A diploma in Restaurant Management is awarded by the college upon completion of this program.

#### General Education Requirements

ENG 111	Writing and Inquiry	3.0
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Select 3 credits of the following: 3.0

MAT 121	Algebra/Trigonometry I	
MAT 143	Quantitative Literacy	

MAT 152	Statistical Methods I	
MAT 171	Precalculus Algebra	
MAT 271	Calculus I	
Select 3 credits of the following:		3.0
COM 110	Introduction to Communication	
COM 231	Public Speaking	
<b>Major Requirements</b>		
CUL 110	Sanitation and Safety	2.0
HRM 110	Introduction to Hospitality and Tourism	3.0
HRM 140	Legal Issues-Hospitality	3.0
HRM 220	Cost Control-Food and Beverage	3.0
HRM 245	Human Resource Management-Hospitality	3.0
HRM 280	Management Problems-Hospitality	3.0
HRM 225	Beverage Management	3.0
WBL 112	Work-Based Learning I	2.0
CIS 111	Basic PC Literacy	2.0
CUL 135	Food and Beverage Service	2.0
CUL 135A	Food and Beverage Service Lab	1.0
HRM 150	Training for Hospitality	3.0
CUL 111	Success in Hospitality Studies	1.0
Total Credits		40

## Hospitality Management Certificates (C25110)

- Restaurant Management Certificate I (C25110-C1) (p. 185)
- Hotel Management Certificate I (C25110-C2) (p. 185)
- Management Skills Certificate (C25110-C3) (p. 185)
- Sales and Events Certificate (C25110-C4) (p. 185)
- Service Certificate (C25110-C5) (p. 186)
- Hospitality Leadership (C25110-C6) (p. 186)

Certificates earned in the Hospitality Management Program are awarded by the college upon successful completion of the program and can be applied toward the Hospitality Management Degree Program.

## Admissions

- Complete an admissions application to Central Piedmont.
- Submit an official high school diploma as well as college transcripts to Admissions, Records & Registration.
- Take placement tests in English, reading, and mathematics.
- Complete all needed developmental studies courses prior to beginning CUL, HRM, and BPA prefix courses.
- Make an appointment for consultation with an academic advisor.
- Make an appointment for consultation with the Hospitality Management Program Chair, Richard Spellman, 704.330.6669.
- Many courses have prerequisites or co-requisites; check the Courses section for details.
- Students must have a CUL, HRM, or BPA program code.

## Notes

- Progression in this program is dependent upon a score of "C" or better in all courses with CUL, HRM, and BPA prefixes.

- All CUL and BPA lab classes require student accident medical insurance.

## Contact Information

The Hospitality Management program is in the Hospitality Education Division. For more information, call 704.330.6669.

## Restaurant Management Certificate I (C25110-C1)

This curriculum prepares students who would like to be employed in entry-level supervisory positions in the restaurant industry.

### Major Requirements

CUL 110	Sanitation and Safety	2.0
HRM 245	Human Resource Management-Hospitality	3.0
HRM 225	Beverage Management	3.0
CUL 135	Food and Beverage Service	2.0
CUL 135A	Food and Beverage Service Lab	1.0
HRM 150	Training for Hospitality	3.0
CUL 111	Success in Hospitality Studies	1.0
Total Credits		15

## Hotel Management Certificate I (C25110-C2)

This curriculum trains students to acquire the skills needed for entry-level hotel supervisory positions.

### Major Requirements

HRM 110	Introduction to Hospitality and Tourism	3.0
HRM 245	Human Resource Management-Hospitality	3.0
HRM 120	Front Office Procedures	3.0
HRM 150	Training for Hospitality	3.0
HRM 230	Club & Resort Management	3.0
CUL 111	Success in Hospitality Studies	1.0
Total Credits		16

## Management Skills Certificate (C25110-C3)

This curriculum is intended for students who have a thorough knowledge of service within the hospitality industry and desire training in management skills. This certificate will help prepare students for entry-level supervisory or management positions in the hospitality industry.

### Major Requirements

HRM 140	Legal Issues-Hospitality	3.0
HRM 240	Marketing for Hospitality	3.0
HRM 245	Human Resource Management-Hospitality	3.0
HRM 225	Beverage Management	3.0
HRM 150	Training for Hospitality	3.0
CUL 111	Success in Hospitality Studies	1.0
Total Credits		16

## Sales and Events Certificate (C25110-C4)

This curriculum presents an introduction to sales and service of conventions and events in various hospitality industry segments. This certificate helps students to explore and train for careers available in the planning and execution of events and conventions.

### Major Requirements

CUL 110	Sanitation and Safety	2.0
HRM 240	Marketing for Hospitality	3.0
HRM 210	Meetings and Event Planning	3.0
CUL 135	Food and Beverage Service	2.0
CUL 135A	Food and Beverage Service Lab	1.0
HRM 230	Club & Resort Management	3.0
CUL 111	Success in Hospitality Studies	1.0
Total Credits		15

### Service Certificate (C25110-C5)

This curriculum introduces students to the basic practices and concepts of providing guest service in a hospitality setting. This certificate prepares students for entry-level service or supervisory positions in the hospitality industry.

### Major Requirements

CUL 110	Sanitation and Safety	2.0
HRM 120	Front Office Procedures	3.0
HRM 210	Meetings and Event Planning	3.0
CUL 135	Food and Beverage Service	2.0
CUL 135A	Food and Beverage Service Lab	1.0
HRM 150	Training for Hospitality	3.0
CUL 111	Success in Hospitality Studies	1.0
Total Credits		15

### Hospitality Leadership Certificate (C25110-C6)

#### Major Requirements

HRM 110	Introduction to Hospitality and Tourism	3.0
HRM 150	Training for Hospitality	3.0
HRM 240	Marketing for Hospitality	3.0
HRM 245	Human Resource Management-Hospitality	3.0
ACC 115	College Accounting	4.0
Total Credits		16

## Human Services Technology

The Human Services Technology curriculum prepares students for entry and mid-level positions in institutions and agencies that provide social, community and educational services.

Students take courses from a variety of disciplines. Emphasis in core courses is placed on development of relevant knowledge, skills and attitudes in human services. Fieldwork experience provides opportunities for application of knowledge and skills learned in the classroom.

Graduates should qualify for positions in mental health, childcare, family services, social services, rehabilitation, correction and educational agencies.

For specific information about potential positions and wages in Human Services employment, visit the Central Piedmont Career Coach website.

## Human Services Technology (A45380)

- Human Services Technology (A45380) (p. 186)
- Human Services Technology Developmental Disabilities Concentration (A4538A) (p. 187)
- Human Services Technology Substance Abuse Concentration (A4538E) (p. 188)

### Degree Awarded

The Associate in Applied Science Degree - Human Services Technology is awarded by the college upon completion of this program.

### Admissions

- Complete the required Central Piedmont admissions application.
- Submit high school transcripts as well as any college transcripts.
- Take required placement tests.
- Complete necessary Developmental reading and writing classes with a "C" or better.
- Many courses have prerequisites or co-requisites; check the Courses section for details.

### Program Accreditation

The Human Services Technology Associates Degree in Applied Sciences has articulation agreements with Queens University of Charlotte and Pfeiffer University. Many of the Human Services courses are accepted in these universities. Some of these courses also may be approved by Gardner-Webb and Wingate University.

### Notes

Students must receive a final grade of "C" or higher in all DDT, HSE, SAB and GRO courses in order to receive credit toward a Human Services Technology degree or certificate.

Internships in a variety of community agencies enable students to gain specialized experience to parallel their classroom work.

A suggested course sequence list is available from the program chair.

### Contact Information

The Human Services Technology program is in the Health and Human Services Division. For more information, call the Program Chair at 704.330.6153, or visit the Health and Human Services website.

#### General Education Requirements

ENG 111	Writing and Inquiry	3.0
Take 3 credits from the following:		3.0
ENG 112	Writing and Research in the Disciplines	
ENG 113	Literature-Based Research	
ENG 114	Professional Research & Reporting	
Take 3 credits from the following:		3.0
COM 110	Introduction to Communication	
COM 231	Public Speaking	
Take 3 credits from the following:		3.0
MAT 110	Mathematical Measurement and Literacy	
MAT 143	Quantitative Literacy	
MAT 152	Statistical Methods I	
MAT 171	Precalculus Algebra	

Take 1 course from the following:	3.0
SOC 210 Introduction to Sociology	
Select 3 credits of the following:	3.0
ART 111 Art Appreciation	
ART 114 Art History Survey I	
ART 115 Art History Survey II	
HUM 120 Cultural Studies	
HUM 130 Myth in Human Culture	
MUS 110 Music Appreciation	
MUS 112 Introduction to Jazz	
PHI 215 Philosophical Issues	
PHI 240 Introduction to Ethics	
REL 110 World Religions	

**Major Requirements**

HSE 110 Introduction to Human Services	3.0
HSE 112 Group Process I	2.0
HSE 123 Interviewing Techniques	3.0
HSE 125 Counseling	3.0
HSE 210 Human Services Issues	2.0
HSE 225 Crisis Intervention	3.0
PSY 150 General Psychology	3.0
SOC 213 Sociology of the Family	3.0

Take one of the following courses: 3.0

PSY 241 Developmental Psychology	
PSY 281 Abnormal Psychology	

**Other Major Requirements**

HSE 120 Interpersonal Relations	3.0
HSE 212 Group Process II	2.0
HSE 220 Case Management	3.0
HSE 227 Children & Adolescents in Crisis	3.0
SAB 110 Substance Abuse Overview	3.0
WBL 111 Work-Based Learning I	1.0
WBL 115 Work-Based Learning Seminar I	1.0
WBL 121 Work-Based Learning II	1.0
WBL 125 Work-Based Learning Seminar II	1.0
DDT 110 Developmental Disabilities	3.0
CIS 110 Introduction to Computers	3.0
HSE 242 Family Systems	3.0

Total Credits 70

**Human Services Technology  
Developmental Disabilities Concentration  
(A4538A)**

The Human Services Technology/Developmental Disabilities program is designed to train students to work with children and adults with physical, mental and emotional disabilities. Students specialize in the areas of developmental disabilities and intellectual disabilities.

Students gain an understanding of the handicapping effects of developmental disabilities in medical, psychological, social, educational, vocational and economic terms. Fieldwork and clinical experience in community agencies providing comprehensive services to persons with disabilities and their families are provided.

Graduates should qualify for employment in group homes, foster care homes, respite services, vocational rehabilitation agencies, sheltered workshops, supported employment programs, adult vocational programs, early childhood education programs and other programs for individuals with developmental and intellectual disabilities.

**Degree Awarded**

The Associate in Applied Science Degree - Human Services Technology with a concentration in Developmental Disabilities is awarded by the college upon completion of this program.

**Admissions**

- Complete the required Central Piedmont admissions application.
- Submit high school transcripts and any college transcripts.
- Take required placement tests.
- Complete necessary Developmental reading and writing classes with a "C" or better.
- Many courses have prerequisites or co-requisites; check the Courses section for details.

**Program Accreditation**

Some Human Services Technology courses have been approved by the National Board for Certified Counselors (NBCC) for Professional Counselor (NCC) renewal credit. Check with Human Services program chairs for specific course information. Human Services Technology/ Substance Abuse courses may be used in applying for certification by the North Carolina Substance Abuse Professional Practice Board.

All Human Services Programs articulate with the Queens University of Charlotte degree in Human and Community Services. Many courses also are accepted at Gardner Webb and Wingate Universities.

**Notes**

Students must receive a final grade of "C" or higher in all DDT, HSE, SAB and GRO courses in order to receive credit toward a Human Services Technology degree or certificate.

Internships in a variety of community agencies enable students to gain specialized experience to parallel their classroom work. The duration of the internship is fall through spring semester, second year.

A suggested course sequence list is available from the program chair.

**Contact Information**

The Developmental Disabilities Program is in the Health and Human Services Division. For more information, call the Program Chair, Sherina Dubose Tillman, at 704.330.6748, or visit the Health and Human Services website.

**General Education Requirements**

ENG 111 Writing and Inquiry	3.0
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Take 3 credits from the following: 3.0

ENG 112 Writing and Research in the Disciplines	
ENG 114 Professional Research & Reporting	

Select one of the following: 3.0

COM 110 Introduction to Communication	
COM 231 Public Speaking	

Take 3 credits from the following: 3.0



MAT 110	Mathematical Measurement and Literacy	
MAT 143	Quantitative Literacy	
MAT 152	Statistical Methods I	
MAT 171	Precalculus Algebra	
Select 3 credits of the following:		3.0
SOC 210	Introduction to Sociology	
Select 3 credits of the following:		3.0
ART 111	Art Appreciation	
ART 114	Art History Survey I	
ART 115	Art History Survey II	
HUM 120	Cultural Studies	
HUM 130	Myth in Human Culture	
MUS 110	Music Appreciation	
MUS 112	Introduction to Jazz	
PHI 215	Philosophical Issues	
PHI 240	Introduction to Ethics	
REL 110	World Religions	
<b>Major Requirements</b>		
HSE 110	Introduction to Human Services	3.0
HSE 112	Group Process I	2.0
HSE 123	Interviewing Techniques	3.0
PSY 150	General Psychology	3.0
HSE 125	Counseling	3.0
HSE 210	Human Services Issues	2.0
HSE 225	Crisis Intervention	3.0
PSY 241	Developmental Psychology	3.0
SOC 213	Sociology of the Family	3.0
<b>Concentration Requirements</b>		
WBL 111	Work-Based Learning I	1.0
WBL 115	Work-Based Learning Seminar I	1.0
DDT 110	Developmental Disabilities	3.0
DDT 120	Teaching Developmental Disabled	3.0
DDT 210	DDT Health Issues	3.0
DDT 220	Program Planning Process	3.0
<b>Other Major Requirements</b>		
WBL 121	Work-Based Learning II	1.0
WBL 125	Work-Based Learning Seminar II	1.0
CIS 111	Basic PC Literacy	2.0
SAB 110	Substance Abuse Overview	3.0
HSE 120	Interpersonal Relations	3.0
DDT 230	Supported Employment	3.0
DDT 240	Aging Lifelong Disability	3.0
Select 3 hours from the following courses:		3.0
ASL 111	Elementary ASL I	
& ASL 181	and ASL Lab 1	
SPA 111	Elementary Spanish I	
& SPA 181	and Spanish Lab 1	
PSY 241	Developmental Psychology	
Total Credits		76

## Human Services Technology Substance Abuse Concentration (A4538E)

The Human Services Technology/Substance Abuse program is designed to prepare students for a career in the field of substance abuse and assist them in the process of State Certification/Licensure. The program also enables students to transfer their credits earned and pursue a four-year degree.

Course work includes classroom and experiential activities oriented toward

- an overview of substance use disorders,
- the physiological, psychological and sociological aspects of addiction,
- the 12 core functions of a substance abuse professional,
- the assessment, diagnosing and treatment of substance use disorders,
- group techniques,
- family dynamics of addiction,
- the ethical and legal aspects involved,
- a basic overview of co-occurring disorders, and
- a two-semester internship working in the field.

Graduates who continue to complete their certification/licensure through the North Carolina Substance Abuse Professional Practice Board qualify for positions as substance abuse counselors, prevention and education specialist, DWI educators and counselors, residential and halfway house counselors, case managers, community-based program managers and criminal justice addiction professionals.

### Degree Awarded

The Associate in Applied Science degree - Human Services Technology with a concentration in Substance Abuse is awarded by the college upon completion of this program.

### Program Accreditation

Human Services Technology Substance Abuse courses are approved by the North Carolina Substance Abuse Professional Practice Board (NCSAPPB) and accepted toward fulfillment of education credits for both the CSAC, LCAS, CSAPS and CCJP credentials. The two semesters of internship (WBL 111/WBL 115 & WBL 121/WBL 125) which are part of the program also meet NCSAPPB requirements for the 300-hour practicum toward certification/licensure. Human Services Technology Substance Abuse courses also are accepted for certification/licensure by NAADAC, the Association for Addiction Professionals. All Human Services Programs, including the Substance Abuse Program, articulate with Queens University, Gardner Webb University, and Pfeiffer University Human Services/Human Relations Programs.

Some Human Services Technology Substance Abuse courses may be used in applying for certification by the North Carolina Substance Abuse Professional Practice Board. Course materials help students become eligible to take the Human Services Board Certified Credential exam (HS-BCP), a national Human Services Credential.

### Admissions

- Complete the required Central Piedmont admissions application.
- Submit high school transcripts and any college transcripts.
- Request that college transcripts be evaluated for transfer credit to Central Piedmont .

- Take any required placement tests.
- For course sequence and registration advisement, contact the program chair at 704.330.6749.

**Notes**

Students must receive a final grade of “C” or higher in all SAB, HSE, DDT and GRO courses in order to receive credit toward a Human Services Technology degree or certificate. A GPA of 2.5 or higher is required for students to begin internships. Internships in a variety of community agencies enable students to gain specialized experience to parallel their classroom work. The duration of the internship is two semesters with a minimum of 320 hours. A suggested course sequence is available from the Program Chair.

**Contact Information**

The Substance Abuse Program is in the Health and Human Services Division. For more information, visit the Substance Abuse Program website.

**General Education Requirements**

ENG 111	Writing and Inquiry	3.0
ENG 112	Writing and Research in the Disciplines	3.0
COM 231	Public Speaking	3.0
SOC 210	Introduction to Sociology	3.0
Select 3 credits from the following:		3.0
ART 111	Art Appreciation	
ART 114	Art History Survey I	
ART 115	Art History Survey II	
HUM 120	Cultural Studies	
HUM 130	Myth in Human Culture	
MUS 110	Music Appreciation	
MUS 112	Introduction to Jazz	
PHI 215	Philosophical Issues	
REL 110	World Religions	
Select one of the following:		3.0
MAT 110	Mathematical Measurement and Literacy	
MAT 143	Quantitative Literacy	
MAT 152	Statistical Methods I	

**Major Requirements**

HSE 110	Introduction to Human Services	3.0
HSE 112	Group Process I	2.0
HSE 123	Interviewing Techniques	3.0
HSE 125	Counseling	3.0
HSE 210	Human Services Issues	2.0
HSE 225	Crisis Intervention	3.0
PSY 150	General Psychology	3.0
SOC 213	Sociology of the Family	3.0
Select 3 credits from the following:		3.0
PSY 241	Developmental Psychology	
PSY 281	Abnormal Psychology	

**Concentration Requirements:**

WBL 111	Work-Based Learning I	1.0
WBL 115	Work-Based Learning Seminar I	1.0
SAB 110	Substance Abuse Overview	3.0
SAB 120	Intake and Assessment	3.0

SAB 125	SA Case Management	3.0
SAB 135	Addictive Process	3.0
SAB 240	Sab Issues in Client Serv	3.0

**Other Major Requirements**

SAB 210	Sub Abuse Counseling	3.0
SAB 220	Group Techniques/Therapy	3.0
SAB 230	Family Therapy	3.0
SAB 250	Prevention and Education	2.0
WBL 121	Work-Based Learning II	1.0
WBL 125	Work-Based Learning Seminar II	1.0

Select 3 credits from the following:		3.0
HSE 120	Interpersonal Relations	
SAB 255	Environmental Prevention	
DDT 110	Developmental Disabilities	
GRO 120	Gerontology	
SAB 140	Pharmacology	

Total Credits 76

**No diplomas are offered in Human Services Technology.**

**Human Services Technology Certificates (C45380)**

Students must receive a final grade of “C” or higher in all DDT, HSE, SAB and GRO courses in order to receive credit toward a Human Services Technology degree or certificate

- Human Services Technology Certificate with a Specialization in Human Services Technology (C45380-C1) (p. 189)
- Human Services Technology Certificate with a Specialization in Case Management (C45380-C2) (p. 190)
- Human Services Technology Certificate with a Specialization in Working with At-Risk Youth (C45380-C3) (p. 190)
- Human Services Technology with a Specialization in Developmental Disabilities (C4538A-C1) (p. 190)
- Human Services Technology with a Specialization in Supported Employment (C4538A-C2) (p. 190)
- Human Services Technology Certificate Specialization in Developmental Disabilities & Deaf Studies (C4538A-C3) (p. )
- Human Services Technology Certificate Specialization in Children with Exceptionalities (C4538A-C4) (p. 191)
- Human Services Technology Certificate Specialization in Developmental Disabilities for Healthcare Professionals (C4538A-C5) (p. 191)
- Human Services Technology Certificate with a Specialization in Substance Abuse (C4538E-C2) (p. 191)
- Human Services Technology Certificate with a Specialization in Substance Abuse Counseling (C4538E-C3) (p. 191)
- Human Services Technology Certificate with a Specialization in Substance Abuse & Behavioral Health Prevention (C4538E-C5) (p. )
- Human Services Technology Certificate with a Specialization in Substance Abuse & Criminal Justice (C4538E-C6) (p. 192)

## Human Services Technology Certificate with a Specialization in Human Services Technology (C45380-C1)

### Major Requirements

HSE 110	Introduction to Human Services	3.0
HSE 112	Group Process I	2.0
HSE 123	Interviewing Techniques	3.0
HSE 210	Human Services Issues	2.0
HSE 225	Crisis Intervention	3.0
WBL 111	Work-Based Learning I	1.0
WBL 115	Work-Based Learning Seminar I	1.0
Total Credits		15

## Human Services Technology Certificate with a Specialization in Case Management (C45380-C2)

### Major Requirements

HSE 110	Introduction to Human Services	3.0
HSE 123	Interviewing Techniques	3.0
HSE 210	Human Services Issues	2.0
HSE 225	Crisis Intervention	3.0
HSE 220	Case Management	3.0
WBL 111	Work-Based Learning I	1.0
WBL 115	Work-Based Learning Seminar I	1.0
Total Credits		16

## Human Services Technology Certificate with a Specialization in Working with At-Risk Youth (C45380-C3)

### Major Requirements

HSE 110	Introduction to Human Services	3.0
HSE 225	Crisis Intervention	3.0
HSE 227	Children & Adolescents in Crisis	3.0
SAB 110	Substance Abuse Overview	3.0
HSE 242	Family Systems	3.0
Take 1 of the following courses:		
PSY 150	General Psychology	3.0
or SOC 210	Introduction to Sociology	
Total Credits		18

## Developmental Disabilities Certificates (C4538A)

Students must receive a final grade of "C" or higher in all DDT, HSE, SAB and GRO courses in order to receive credit toward a Human Services Technology degree or certificate.

## Human Services Technology with a Specialization in Developmental Disabilities (C4538A-C1)

This certificate is designed to provide the student with a concentrated course of study in the field of developmental disabilities. Upon completion

of the six courses, a certificate is awarded by the college. This certificate may be applied toward the Associate Degree in Human Services Technology with a concentration in Developmental Disabilities.

For more information, call the program office at 704.330.6153 or visit the Health and Human Services website.

### Major Requirements

DDT 110	Developmental Disabilities	3.0
DDT 120	Teaching Developmental Disabled	3.0
DDT 210	DDT Health Issues	3.0
DDT 220	Program Planning Process	3.0
DDT 230	Supported Employment	3.0
DDT 240	Aging Lifelong Disability	3.0
Total Credits		18

## Human Services Technology with a Specialization in Supported Employment (C4538A-C2)

This certificate is designed to provide the student with a concentrated course of study in supported employment methods. Upon completion of the four courses, a certificate is awarded by the college. This certificate may be applied toward the Associate Degree in Human Services Technology with a concentration in Developmental Disabilities.

For more information, call the program office at 704.330.6153 or visit the Health and Human Services website.

### Major Requirements

DDT 110	Developmental Disabilities	3.0
DDT 120	Teaching Developmental Disabled	3.0
DDT 220	Program Planning Process	3.0
DDT 230	Supported Employment	3.0
Total Credits		12

## Human Services Technology Certificate Specialization in Developmental Disabilities & Deaf Studies (C4538A-C3)

This certificate is designed to provide students with a concentrated, collaborative course of study in Developmental Disabilities and Deaf Studies. A strong emphasis is placed on understanding and supporting people with disabilities who also are deaf or have experienced a significant loss of hearing. Coursework provides students with some basic knowledge of Deaf culture, language diversity, American Sign Language, and services available to deaf and hard of hearing individuals. Students also gain familiarity with requirements for accommodations related to communications access and available assistive technologies. An internship is required for completion of this certificate.

### Major Requirements

DDT 110	Developmental Disabilities	3.0
DDT 120	Teaching Developmental Disabled	3.0
WBL 111	Work-Based Learning I	1.0
WBL 115	Work-Based Learning Seminar I	1.0
ASL 120	ASL for the Workplace	3.0

ASL 225	Global Deaf Community	3.0
Total Credits		14

### Human Services Technology Certificate Specialization in Children with Exceptionalities (C4538A-C4)

**Major Requirements**

EDU 131		3.0
EDU 188	Issues in Early Childhood Education	2.0
EDU 288	Advanced Issues in Early Childhood Education	2.0
DDT 110	Developmental Disabilities	3.0
DDT 120	Teaching Developmental Disabled	3.0
DDT 220	Program Planning Process	3.0
Total Credits		16

### Human Services Technology Certificate Specialization in Developmental Disabilities for Healthcare Professionals (C4538A-C5)

This certificate is designed to provide the student with a concentrated course of study in the field of developmental disabilities and integrated health care service delivery. The proposed course of study provides education, training, and support for health care professionals and human service practitioners who work with individuals with intellectual and developmental disabilities, and their families. Students will gain basic knowledge of typical and atypical development, developmental disabilities and etiology, support and service strategies, group problem solving, and the fundamental elements of American Sign Language within a cultural context with emphasis on expressive and receptive language in a healthcare setting. This certificate may be applied toward the Associate Degree in Human Service Technology with a concentration in Developmental Disabilities.

DDT 110	Developmental Disabilities	3.0
DDT 210	DDT Health Issues	3.0
DDT 240	Aging Lifelong Disability	3.0
ASL 111	Elementary ASL I	3.0
ASL 181	ASL Lab 1	1.0
Total Credits		13

### Substance Abuse Certificates (C4538E)

Students must receive a final grade of "C" or higher in all DDT, HSE, SAB and GRO courses in order to receive credit toward a Human Services Technology degree or certificate. A GPA of 2.5 or higher is required for students to begin their internship.

The certificates are designed to provide students with a concentrated course of study in the field of Substance Abuse. Selection of certificate choice depends on the student's specific career goals. Upon completion of these courses, a certificate is awarded by the college. This certificate may be applied towards the initial or renewal of Certification/Licensure through the North Carolina Substance Abuse Professional Practice Board or NAADAC, the Association for Addiction Professionals.

**Notes**

It is strongly recommend that certificate students who are interested in a career as a substance abuse counselor take *all* of the substance abuse (SAB) courses, not just those required for a particular certificate, to fully

prepare for clinical practice, meet Board training requirements and prepare for the Board credentialing exam.

**Contact Information**

For more information, visit the Substance Abuse Program website.

### Human Services Technology Certificate with a Specialization in Substance Abuse (C4538E-C2)

The certificate is designed to provide students with a concentrated course of study in the field of Substance Abuse. Upon completion of the courses, a certificate of study is awarded by the college.

Note that this certificate does not include an internship.

**Major Requirements**

HSE 125	Counseling	3.0
SAB 110	Substance Abuse Overview	3.0
SAB 120	Intake and Assessment	3.0
SAB 125	SA Case Management	3.0
SAB 210	Sub Abuse Counseling	3.0
SAB 230	Family Therapy	3.0
Total Credits		18

### Human Services Technology Certificate with a Specialization in Substance Abuse Counseling (C4538E-C3)

This certificate is designed to provide students with a concentrated course of study in the field of Substance Abuse with a strong emphasis on clinical applications. Upon completion of the courses, a certificate of study is awarded by the college.

Note that this certificate includes two semesters of internship (WBL).

**Major Requirements**

HSE 112	Group Process I	2.0
SAB 110	Substance Abuse Overview	3.0
SAB 120	Intake and Assessment	3.0
SAB 240	Sab Issues in Client Serv	3.0
WBL 111	Work-Based Learning I	1.0
WBL 115	Work-Based Learning Seminar I	1.0
SAB 220	Group Techniques/Therapy	3.0
WBL 121	Work-Based Learning II	1.0
WBL 125	Work-Based Learning Seminar II	1.0
Total Credits		18

### Human Services Technology Certificate with a Specialization in Substance Abuse & Behavioral Health Prevention (C4538E-C5)

The certificate is designed to provide students with a concentrated course of study in the field of Prevention with a focus on community education, community organizing, and policy advocacy. Upon completion of the courses, a certificate of study is awarded by the college.

Note that this certificate may be accomplished completely online and does not include an internship.



**Major Requirements**

HSE 110	Introduction to Human Services	3.0
SAB 110	Substance Abuse Overview	3.0
SAB 240	Sab Issues in Client Serv	3.0
SAB 250	Prevention and Education	2.0
SAB 255	Environmental Prevention	3.0
Total Credits		14

**Human Services Technology Certificate with a Specialization in Substance Abuse & Criminal Justice (C4538E-C6)**

**Major Requirements**

SAB 110	Substance Abuse Overview	3.0
SAB 120	Intake and Assessment	3.0
SAB 240	Sab Issues in Client Serv	3.0
CJC 111	Introduction to Criminal Justice	3.0
CJC 112	Criminology	3.0
CJC 241	Community-Based Corrections	3.0
Total Credits		18

**Information Technology**

The Information Technology (IT) curriculum prepares graduates for employment in a variety of technology fields including software development, networking, cyber security, database management, virtualization and web design.

Course work includes development of a student's ability to create, store, communicate, exchange and use information to solve technical issues related to information support and services, network systems, programming and software development, information security and other emerging technologies based on the selected area of study.

Graduates should qualify for employment in entry-level positions with businesses, educational systems, and governmental agencies which rely on computer systems to design and manage information. The program incorporates the competencies of many industry-recognized certifications.

For specific information about potential positions and wages in Information Technology employment, visit the Central Piedmont Career Coach website.

**Information Technology (A25590)**

- Information Technology - IT/Business Analysis (A25590B) (p. 192)
- Information Technology - Database Development/Business Intelligence (A25590D) (p. 192)
- Information Technology - Information Assurance & Digital Forensics (A25590F) (p. 193)
- Information Technology - Networking Technologies (A25590N) (p. 194)
- Information Technology - Full Stack Programming (A25590P) (p. 194)
- Information Technology - Software Development (A25590S) (p. 195)
- Information Technology - Cloud & Virtualization Technologies (A25590V) (p. 195)
- Information Technology - Web Technologies (A25590W) (p. 196)

**Information Technnology - IT/Business Analysis (A25590B)**

**General Education Requirements**

ENG 111	Writing and Inquiry	3.0
ENG 112	Writing and Research in the Disciplines	3.0
or ENG 114	Professional Research & Reporting	
COM 231	Public Speaking	3.0
MAT 152	Statistical Methods I	4.0
Select 3.0 credits from the following:		3.0
ART 111	Art Appreciation	
ART 114	Art History Survey I	
ART 115	Art History Survey II	
HUM 120	Cultural Studies	
HUM 130	Myth in Human Culture	
MUS 110	Music Appreciation	
MUS 112	Introduction to Jazz	
PHI 215	Philosophical Issues	
PHI 240	Introduction to Ethics	
REL 110	World Religions	

Select 3.0 credits from the following: 3.0

ECO 251	Principles of Microeconomics	
ECO 252	Principles of Macroeconomics	
HIS 111	World Civilizations I	
HIS 112	World Civilizations II	
HIS 131	American History I	
HIS 132	American History II	
POL 120	American Government	
PSY 150	General Psychology	
SOC 210	Introduction to Sociology	

**IT Core**

CTI 110	Web, Programming, and Database Foundation	3.0
CTI 120	Network and Security Foundation	3.0
CTI 130	Operating Systems and Device Foundation	6.0
CTS 115	Information Systems Business Concepts	3.0

**Major Requirements**

CIS 110	Introduction to Computers	3.0
CSC 119	Programming Orientation	2.0
CSC 152	SAS	3.0
CTS 130	Spreadsheet	3.0
CTS 118	Is Professional Communications	2.0
CTS 225	Spreadsheet Data Analysis	3.0
CTS 230	Advanced Spreadsheet	3.0
CTS 240	Project Management	3.0
DBA 112	Database Utilization	3.0
DBA 120	Database Programming I	3.0
DBA 125	Database Reporting	3.0
WEB 110	Internet/Web Fundamentals	3.0

Total Credits 68

**Information Technology - Database Development/  
Business Intelligence (A25590D)**

**General Education Requirements**

ENG 111	Writing and Inquiry	3.0
ENG 112	Writing and Research in the Disciplines	3.0
or ENG 114	Professional Research & Reporting	
COM 231	Public Speaking	3.0
Select 3.0 credits from the following:		3.0
MAT 143	Quantitative Literacy	
MAT 152	Statistical Methods I	
MAT 171	Precalculus Algebra	
Select 3.0 credits from the following:		3.0
ART 111	Art Appreciation	
ART 114	Art History Survey I	
ART 115	Art History Survey II	
HUM 120	Cultural Studies	
HUM 130	Myth in Human Culture	
MUS 110	Music Appreciation	
MUS 112	Introduction to Jazz	
PHI 215	Philosophical Issues	
PHI 240	Introduction to Ethics	
REL 110	World Religions	
Select 3.0 credits from the following:		3.0
ECO 251	Principles of Microeconomics	
ECO 252	Principles of Macroeconomics	
HIS 111	World Civilizations I	
HIS 112	World Civilizations II	
HIS 131	American History I	
HIS 132	American History II	
POL 120	American Government	
PSY 150	General Psychology	
SOC 210	Introduction to Sociology	

**IT Core**

CTI 110	Web, Programming, and Database Foundation	3.0
CTI 120	Network and Security Foundation	3.0
CTI 130	Operating Systems and Device Foundation	6.0
CTS 115	Information Systems Business Concepts	3.0

**Major Requirements**

CIS 110	Introduction to Computers	3.0
Select 3.0 credits from the following:		3.0
CIS 115	Introduction to Programming and Logic	
CSC 120	Computing Fundamentals I	
CSC 143	Object-Oriented Programming	
CSC 152	SAS	3.0
CTS 240	Project Management	3.0
DBA 110	Database Concepts	3.0
DBA 112	Database Utilization	3.0
DBA 120	Database Programming I	3.0
DBA 125	Database Reporting	3.0
DBA 210	Database Administration	3.0
DBA 220	Oracle Database Programming II	3.0
or DBA 221	SQL Server Database Programming II	

DBA 285	Data Warehousing and Mining	3.0
CTI 289	Computer Technology Integration Capstone Project	3.0
Total Credits		69

**Information Technology - Information Assurance  
& Digital Forensics (A25590F)**

**General Education Requirements**

ENG 111	Writing and Inquiry	3.0
ENG 112	Writing and Research in the Disciplines	3.0
or ENG 114	Professional Research & Reporting	
COM 231	Public Speaking	3.0
Select 3.0 credits from the following:		3.0
MAT 121	Algebra/Trigonometry I	
MAT 143	Quantitative Literacy	
MAT 152	Statistical Methods I	
MAT 171	Precalculus Algebra	
Select 3.0 credits from the following:		3.0
ART 111	Art Appreciation	
ART 114	Art History Survey I	
ART 115	Art History Survey II	
HUM 120	Cultural Studies	
HUM 130	Myth in Human Culture	
MUS 110	Music Appreciation	
MUS 112	Introduction to Jazz	
PHI 215	Philosophical Issues	
PHI 240	Introduction to Ethics	
REL 110	World Religions	
Select 3.0 credits from the following:		3.0
ECO 251	Principles of Microeconomics	
ECO 252	Principles of Macroeconomics	
HIS 111	World Civilizations I	
HIS 112	World Civilizations II	
HIS 131	American History I	
HIS 132	American History II	
POL 120	American Government	
PSY 150	General Psychology	
SOC 210	Introduction to Sociology	

**IT Core**

CTI 110	Web, Programming, and Database Foundation	3.0
CTI 120	Network and Security Foundation	3.0
CTI 130	Operating Systems and Device Foundation	6.0
CTS 115	Information Systems Business Concepts	3.0

**Major Requirements**

CCT 110	Introduction to Cyber Crime	3.0
SEC 110	Security Concepts	3.0
SEC 151	Introduction to Protocol Analysis	3.0
SEC 251	Advanced Protocol Analysis	3.0
SEC 258	Security Compliance	3.0
CCT 121	Computer Crime Investigation	4.0
CCT 231	Technology Crimes & Law	3.0
CCT 240	Data Recovery Techniques	3.0
CCT 241	Advanced Data Recovery	3.0

Programs of Study

CCT 260	Mobile Phone Examination	3.0
CCT 289	Capstone Project	3.0
Select 3.0 credits from the following major electives:		3.0
SEC 285	Systems Security Project	
NOS 120	Linux/UNIX Single User	
WBL 111	Work-Based Learning I	
WBL 121	Work-Based Learning II	
WBL 131	Work-Based Learning III	
Total Credits		70

### Information Technology - Networking Technologies (A25590N)

**General Education Requirements**

ENG 111	Writing and Inquiry	3.0
ENG 112	Writing and Research in the Disciplines	3.0
or ENG 114	Professional Research & Reporting	
COM 231	Public Speaking	3.0
Select 3.0 credits from the following:		3.0
MAT 121	Algebra/Trigonometry I	
MAT 143	Quantitative Literacy	
MAT 152	Statistical Methods I	
MAT 171	Precalculus Algebra	
Select 3.0 credits from the following:		3.0
ART 111	Art Appreciation	
ART 114	Art History Survey I	
ART 115	Art History Survey II	
HUM 120	Cultural Studies	
HUM 130	Myth in Human Culture	
MUS 110	Music Appreciation	
MUS 112	Introduction to Jazz	
PHI 215	Philosophical Issues	
PHI 240	Introduction to Ethics	
REL 110	World Religions	
Select 3.0 credits from the following:		3.0
ECO 251	Principles of Microeconomics	
ECO 252	Principles of Macroeconomics	
HIS 111	World Civilizations I	
HIS 112	World Civilizations II	
HIS 131	American History I	
HIS 132	American History II	
POL 120	American Government	
PSY 150	General Psychology	
SOC 210	Introduction to Sociology	

**IT Core**

CTI 110	Web, Programming, and Database Foundation	3.0
CTI 120	Network and Security Foundation	3.0
CTI 130	Operating Systems and Device Foundation	6.0
CTS 115	Information Systems Business Concepts	3.0

**Major Requirements**

CIS 110	Introduction to Computers	3.0
SEC 110	Security Concepts	3.0
NOS 120	Linux/UNIX Single User	3.0

NOS 130	Windows Single User	3.0
NOS 230	Windows Administration I	3.0
NOS 231	Windows Administration II	3.0
NOS 232	Windows Administration III	3.0
NET 125	Introduction to Networks	3.0
NET 126	Routing Basics	3.0
NET 225	Routing & Switching I	3.0
NET 226	Routing and Switching II	3.0
NET 289	Networking Project	3.0
Select 3.0 credits from the following major electives:		3.0
CCT 121	Computer Crime Investigation	
WBL 111	Work-Based Learning I	
WBL 121	Work-Based Learning II	
WBL 131	Work-Based Learning III	
Total Credits		72

### Information Technology - Full Stack Programming (A25590P)

**General Education Requirements**

ENG 111	Writing and Inquiry	3.0
ENG 112	Writing and Research in the Disciplines	3.0
or ENG 114	Professional Research & Reporting	
COM 231	Public Speaking	3.0
Select 3.0 credits from the following:		3.0
MAT 121	Algebra/Trigonometry I	
MAT 143	Quantitative Literacy	
MAT 152	Statistical Methods I	
MAT 171	Precalculus Algebra	
Select 3.0 credits from the following:		3.0
ART 111	Art Appreciation	
ART 114	Art History Survey I	
ART 115	Art History Survey II	
HUM 120	Cultural Studies	
HUM 130	Myth in Human Culture	
MUS 110	Music Appreciation	
MUS 112	Introduction to Jazz	
PHI 215	Philosophical Issues	
PHI 240	Introduction to Ethics	
REL 110	World Religions	
Select 3.0 credits from the following:		3.0
ECO 251	Principles of Microeconomics	
ECO 252	Principles of Macroeconomics	
HIS 111	World Civilizations I	
HIS 112	World Civilizations II	
HIS 131	American History I	
HIS 132	American History II	
POL 120	American Government	
PSY 150	General Psychology	
SOC 210	Introduction to Sociology	

**IT Core**

CTI 110	Web, Programming, and Database Foundation	3.0
CTI 120	Network and Security Foundation	3.0

CTI 130	Operating Systems and Device Foundation	6.0
CTS 115	Information Systems Business Concepts	3.0
<b>Major Requirements</b>		
CIS 110	Introduction to Computers	3.0
CIS 115	Introduction to Programming and Logic	3.0
CSC 121	Python Programming	3.0
CSC 122	Python Application Development	3.0
CSC 143	Object-Oriented Programming	3.0
CSC 154	Software Development	3.0
DBA 110	Database Concepts	3.0
DBA 120	Database Programming I	3.0
WEB 110	Internet/Web Fundamentals	3.0
WEB 115	Web Markup and Scripting	3.0
WEB 215	Advanced Markup and Scripting	3.0
CSC 289	Programming Capstone Project	3.0
Total Credits		69

**Information Technology - Software Development (A25590S)**

**General Education Requirements**

ENG 111	Writing and Inquiry	3.0
ENG 112	Writing and Research in the Disciplines	3.0
or ENG 114	Professional Research & Reporting	
COM 231	Public Speaking	3.0
Select 3.0 credits from the following:		3.0
MAT 143	Quantitative Literacy	
MAT 152	Statistical Methods I	
MAT 171	Precalculus Algebra	
Select 3.0 credits from the following:		3.0
ART 111	Art Appreciation	
ART 114	Art History Survey I	
ART 115	Art History Survey II	
HUM 120	Cultural Studies	
HUM 130	Myth in Human Culture	
MUS 110	Music Appreciation	
MUS 112	Introduction to Jazz	
PHI 215	Philosophical Issues	
PHI 240	Introduction to Ethics	
REL 110	World Religions	
Select 3.0 credits from the following:		3.0
ECO 251	Principles of Microeconomics	
ECO 252	Principles of Macroeconomics	
HIS 111	World Civilizations I	
HIS 112	World Civilizations II	
HIS 131	American History I	
HIS 132	American History II	
POL 120	American Government	
PSY 150	General Psychology	
SOC 210	Introduction to Sociology	

**IT Core Requirements**

CTI 110	Web, Programming, and Database Foundation	3.0
CTI 120	Network and Security Foundation	3.0

CTI 130	Operating Systems and Device Foundation	6.0
CTS 115	Information Systems Business Concepts	3.0
<b>Major Requirements</b>		
CIS 110	Introduction to Computers	3.0
WEB 110	Internet/Web Fundamentals	3.0
DBA 120	Database Programming I	3.0
CTS 240	Project Management	3.0
CSC 143	Object-Oriented Programming	3.0
CSC 151	JAVA Programming	3.0
CSC 154	Software Development	3.0
CSC 174	Server-Side Javascript	3.0
CSC 249	Data Structure & Algorithms	3.0
CSC 251	Advanced JAVA Programming	3.0
CSC 256	Software Quality Assurance	3.0
or CSC 284	Emerging Computer Prog Technologies	
CTI 289	Computer Technology Integration Capstone Project	3.0
Total Credits		69

**Information Technology - Cloud & Virtualization Technologies (A25590V)**

**General Education Requirements**

ENG 111	Writing and Inquiry	3.0
ENG 112	Writing and Research in the Disciplines	3.0
or ENG 114	Professional Research & Reporting	
COM 231	Public Speaking	3.0
Select 3.0 credits from the following:		3.0
MAT 121	Algebra/Trigonometry I	
MAT 143	Quantitative Literacy	
MAT 152	Statistical Methods I	
MAT 171	Precalculus Algebra	
Select 3.0 credits from the following:		3.0
ART 111	Art Appreciation	
ART 114	Art History Survey I	
ART 115	Art History Survey II	
HUM 120	Cultural Studies	
HUM 130	Myth in Human Culture	
MUS 110	Music Appreciation	
MUS 112	Introduction to Jazz	
PHI 215	Philosophical Issues	
PHI 240	Introduction to Ethics	
REL 110	World Religions	
Select 3.0 credits from the following:		3.0
ECO 251	Principles of Microeconomics	
ECO 252	Principles of Macroeconomics	
HIS 111	World Civilizations I	
HIS 112	World Civilizations II	
HIS 131	American History I	
HIS 132	American History II	
POL 120	American Government	
PSY 150	General Psychology	
SOC 210	Introduction to Sociology	

**IT Core**



## Programs of Study

CTI 110	Web, Programming, and Database Foundation	3.0
CTI 120	Network and Security Foundation	3.0
CTI 130	Operating Systems and Device Foundation	6.0
CTS 115	Information Systems Business Concepts	3.0

### Major Requirements

CIS 110	Introduction to Computers	3.0
SEC 110	Security Concepts	3.0
NOS 120	Linux/UNIX Single User	3.0
NOS 130	Windows Single User	3.0
NET 125	Introduction to Networks	3.0
NET 126	Routing Basics	3.0
CTI 140	Virtualization Concepts	3.0
CTI 141	Cloud and Storage Concepts	3.0
CTI 240	Virtualization Administration I	3.0
CTI 241	Virtualization Administration II	3.0
CTI 260	Data Center Troubleshooting	3.0
CTI 270	Data Center Design and Problem Resolution	3.0

Select 3.0 credits from the following major electives: 3.0

CCT 121	Computer Crime Investigation	
WBL 111	Work-Based Learning I	
WBL 121	Work-Based Learning II	
WBL 131	Work-Based Learning III	

Total Credits 72

## Information Technology - Web Technologies (A25590W)

### General Education Requirements

ENG 111	Writing and Inquiry	3.0
ENG 112	Writing and Research in the Disciplines	3.0
or ENG 114	Professional Research & Reporting	
COM 231	Public Speaking	3.0

Select 3.0 credits from the following: 3.0

MAT 143	Quantitative Literacy	
MAT 152	Statistical Methods I	
MAT 171	Precalculus Algebra	

Select 3.0 credits from the following: 3.0

ART 111	Art Appreciation	
ART 114	Art History Survey I	
ART 115	Art History Survey II	
HUM 120	Cultural Studies	
HUM 130	Myth in Human Culture	
MUS 110	Music Appreciation	
MUS 112	Introduction to Jazz	
PHI 215	Philosophical Issues	
PHI 240	Introduction to Ethics	
REL 110	World Religions	

Select 3.0 credits from the following: 3.0

ECO 251	Principles of Microeconomics	
ECO 252	Principles of Macroeconomics	
HIS 111	World Civilizations I	
HIS 112	World Civilizations II	
HIS 131	American History I	

HIS 132	American History II	
POL 120	American Government	
PSY 150	General Psychology	
SOC 210	Introduction to Sociology	

### IT Core

CTI 110	Web, Programming, and Database Foundation	3.0
CTI 120	Network and Security Foundation	3.0
CTI 130	Operating Systems and Device Foundation	6.0
CTS 115	Information Systems Business Concepts	3.0

### Major Requirements

CIS 110	Introduction to Computers	3.0
CSC 143	Object-Oriented Programming	3.0
CTS 240	Project Management	3.0
DBA 120	Database Programming I	3.0
WEB 110	Internet/Web Fundamentals	3.0
WEB 115	Web Markup and Scripting	3.0
WEB 120	Introduction to Internet Multimedia	3.0
WEB 140	Web Development Tools	3.0
WEB 210	Web Design	3.0
WEB 215	Advanced Markup and Scripting	3.0
WEB 250	Database Driven Websites	3.0
CTI 289	Computer Technology Integration Capstone Project	3.0

Total Credits 69

## No diplomas are offered in Information Technology.

## Information Technology Certificates (C25590)

- Information Technology Certificate Specialization in Information Technology Fundamentals (C25590-C3) (p. 196)
- Information Technology Certificate Specialization in Mobile Apps Development Fundamentals (C25590-20) (p. 197)
- Information Technology Certificate Specialization in Web Development Fundamentals (C25590-21) (p. 197)
- Information Technology Certificate Specialization in Applications Software Fundamentals (C25590-40) (p. 197)
- Information Technology Certificate Specialization in Computer Programming Fundamentals (C25590-41) (p. 197)
- Information Technology Certificate Specialization in Cyber Security (C25590-60) (p. 197)
- Information Technology Certificate Specialization in Cyber Security Specialist (C25590-61) (p. 197)

## Information Technology Certificate Specialization in Information Technology Fundamentals (C25590-C3)

### Major Requirements

CTI 110	Web, Programming, and Database Foundation	3.0
CTI 120	Network and Security Foundation	3.0
CTI 130	Operating Systems and Device Foundation	6.0
CTS 115	Information Systems Business Concepts	3.0

CIS 110	Introduction to Computers	3.0
Total Credits		18

### Information Technology Certificate Specialization in Mobile Apps Development Fundamentals (C25590-20)

**Major Requirements**

WEB 110	Internet/Web Fundamentals	3.0
WEB 115	Web Markup and Scripting	3.0
WEB 141	Mobile Interface Design	3.0
WEB 151	Mobile Application Development I	3.0
Total Credits		12

### Information Technology Certificate Specialization in Web Development Fundamentals (C25590-21)

**Major Requirements**

WEB 110	Internet/Web Fundamentals	3.0
WEB 115	Web Markup and Scripting	3.0
WEB 120	Introduction to Internet Multimedia	3.0
WEB 140	Web Development Tools	3.0
Total Credits		12

### Information Technology Certificate Specialization in Applications Software Fundamentals (C25590-40)

**Major Requirements**

CTI 110	Web, Programming, and Database Foundation	3.0
CIS 110	Introduction to Computers	3.0
or CTS 115	Information Systems Business Concepts	
Select 3.0 credits from the following:		3.0
DBA 110	Database Concepts	
DBA 112	Database Utilization	
DBA 120	Database Programming I	
Select 3.0 credits from the following:		3.0
WEB 110	Internet/Web Fundamentals	
WEB 115	Web Markup and Scripting	
DBA 125	Database Reporting	
Select 3.0 credits from the following:		3.0
CIS 115	Introduction to Programming and Logic	
CSC 119	Programming Orientation	
CSC 134	C++ Programming	
CSC 139	Visual BASIC Programming	
CSC 143	Object-Oriented Programming	
CSC 151	JAVA Programming	
CSC 153	C# Programming	
Total Credits		15

### Information Technology Certificate Specialization in Computer Programming Fundamentals (C25590-41)

**Major Requirements**

CSC 154	Software Development	3.0
Select one from the following		
CSC 120	Computing Fundamentals I	3.0-4.0
or CSC 143	Object-Oriented Programming	
CSC 151	JAVA Programming	3.0
Select one from the following		
CSC 249	Data Structure & Algorithms	3.0
or CSC 251	Advanced JAVA Programming	
Total Credits		12-13

### Information Technology Certificate Specialization in Cyber Security (C25590-60)

**Major Requirements**

CTI 120	Network and Security Foundation	3.0
CTI 130	Operating Systems and Device Foundation	6.0
SEC 110	Security Concepts	3.0
CCT 121	Computer Crime Investigation	4.0
Total Credits		16

### Information Technology Certificate Specialization in Cyber Security Specialist (C25590-61)

**Major Requirements**

SEC 151	Introduction to Protocol Analysis	3.0
SEC 258	Security Compliance	3.0
CCT 240	Data Recovery Techniques	3.0
CCT 241	Advanced Data Recovery	3.0
CCT 260	Mobile Phone Examination	3.0
Total Credits		15

## Interior Design

The Interior Design curriculum is designed to prepare students for a variety of job opportunities in the field of both residential and non-residential interior design. The focus of the studies is technical knowledge, professional practices and aesthetic principles.

Curriculum content includes residential and non-residential interior design, architectural drafting, computer-aided design and universal design. Also included are basic design, history of interiors and furnishings, color theory, products, business practices, graphic presentations and general education courses.

Graduates should qualify for a variety of jobs including residential and commercial interior design, set design, showroom design and sales positions for furniture, textiles and accessories and all businesses dealing with interiors.

### General Information

Increasingly, our interior living and working spaces are being developed for a more sophisticated society. The Interior Design program at Central

Piedmont prepares students to design the interior spaces of today and tomorrow using the best of today's technology.

For specific information about potential positions and wages in Interior Design employment, visit the Central Piedmont Career Coach website.

## Interior Design (A30220)

### Degree Awarded

The Associate in Applied Science Degree - Interior Design is awarded by the College upon completion of this program.

### Admissions

- A high school diploma or equivalent is required. GED High School Equivalency and High School Diploma classes are available at Central Piedmont .
- Central Piedmont placement tests are required in English and mathematics. Developmental Studies in mathematics and English courses are available for students to build basic skills and knowledge.
- A counseling/orientation appointment follows placement testing.
- Contact the Program chair to enter the Interior Design program.
- Many courses have prerequisites or co-requisites; check the Courses section for details.

### Contact Information

For more information, call the Interior Design Department at 704.330.6548, or visit the Interior Design Program website.

#### General Education Requirements

ENG 111	Writing and Inquiry	3.0
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PSY 150	General Psychology	3.0
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Take one of the following:		3.0
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ENG 112	Writing and Research in the Disciplines	
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ENG 113	Literature-Based Research	
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ENG 114	Professional Research & Reporting	
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COM 110	Introduction to Communication (Take one of the following)	3.0
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or COM 231	Public Speaking	
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Take one of the following		3.0
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MAT 110	Mathematical Measurement and Literacy	
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MAT 143	Quantitative Literacy	
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MAT 152	Statistical Methods I	
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MAT 171	Precalculus Algebra	
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MAT 271	Calculus I	
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Take 1 course:		3.0
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ART 114	Art History Survey I	
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ART 115	Art History Survey II	
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#### Major Requirements

DES 110	Architectural Graphics	2.0
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DES 112	Building and Construction Systems	3.0
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DES 120	CAD for Interior Design	2.0
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or ARC 114	Architectural CAD	
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DES 125	Visual Presentation I	2.0
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DES 130	Digital Applications and Interior Design	3.0
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DES 135	Principles and Elements of Design I	4.0
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DES 210	Professional Practices for Interior Design	2.0
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DES 220	Interior Design Fundamentals	3.0
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DES 225	Textiles for Interiors	3.0
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DES 230	Residential Design I	3.0
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DES 231	Residential Design II	3.0
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DES 235	Products	3.0
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DES 240	Commercial and Contract Design I	3.0
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DES 241	Commercial/Contract Design II	3.0
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DES 255	History of Interiors and Furnishings I	3.0
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DES 275	Furniture Design & Construction	3.0
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DES 280	Codes and Standards/Interior Design	3.0
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#### Technical Electives

Select 4 credits of the following:		4.0
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DES 115	Color Theory	
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DES 121	CAD for Interior Design/Advanced	
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DES 242	Kitchen and Bath Design	
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DES 265	Lighting/Interior Design	
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SST 140	Green Building and Design Concepts	
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ARC 112	Construction Materials & Methods	
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ARC 220	Advanced Architectural CAD	
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ARC 221	Architectural 3-D CAD	
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ARC 225	Architectural Building Information Modeling I	
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ARC 262	Architectural Animation & Video	
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WBL 111	Work-Based Learning I	
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WBL 112	Work-Based Learning I	
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DES 243	Advanced Kitchen and Bath Design	
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Total Credits		70
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### Interior Design Diplomas (D30220)

- Residential Interior Decoration Diploma and Home Staging (D30220-D2) (p. 198)
- Kitchen and Bath Design Diploma (D30220-D3) (p. 199)

### Residential Interior Decoration Diploma and Home Staging (D30220D2)

The Residential Interior Decoration and Home Staging Diploma is designed to prepare students for a variety of job opportunities in the field of residential interior decorating. The focus of the studies is technical knowledge, professional practices and aesthetic principles.

Curriculum content includes residential interior design, architectural drafting and computer-aided drafting/design. Also included are basic elements of design, history of interiors and furnishings, color theory, graphic presentation, business practices and general education courses.

Graduates should qualify for a variety of jobs including residential interior design, set design, showroom design and sales positions for furniture, textiles and accessories.

Careful planning should allow students to complete the diploma in three full-time semesters or in six to seven part-time semesters.

For more information, please visit the Interior Design Program website.

#### General Education Requirements

ENG 111	Writing and Inquiry	3.0
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Choose one of the following		3.0
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MAT 110	Mathematical Measurement and Literacy	
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MAT 143	Quantitative Literacy	
MAT 152	Statistical Methods I	
MAT 171	Precalculus Algebra	
MAT 271	Calculus I	
<b>Major Requirements</b>		
DES 110	Architectural Graphics	2.0
DES 120	CAD for Interior Design	2.0
DES 112	Building and Construction Systems	3.0
DES 125	Visual Presentation I	2.0
DES 130	Digital Applications and Interior Design	3.0
DES 210	Professional Practices for Interior Design	2.0
DES 220	Interior Design Fundamentals	3.0
DES 225	Textiles for Interiors	3.0
DES 255	History of Interiors and Furnishings I	3.0
DES 230	Residential Design I	3.0
ART 115	Art History Survey II	3.0
or ART 114	Art History Survey I	
Select 3 credits from the following courses:		3.0
DES 115	Color Theory	
DES 135	Principles and Elements of Design I	
DES 121	CAD for Interior Design/Advanced	
DES 235	Products	
DES 242	Kitchen and Bath Design	
DES 265	Lighting/Interior Design	
DES 275	Furniture Design & Construction	
WBL 111	Work-Based Learning I	
Total Credits		38

### Kitchen and Bath Design Diploma (D30220-D3)

The Diploma in Kitchen and Bath Design equips students with the knowledge, skills, and competence needed for working in this specialized design area. Coursework includes the basics of design; both computer-aided and manual drafting techniques; 3D computer modeling; kitchen and bath materials, products, and business practices.

Graduates should qualify for a variety of jobs with businesses that specialize in or relate to design, sales, and installation of residential kitchens and baths.

#### General Education Requirements

ENG 111	Writing and Inquiry	3.0
Take one course		3.0
COM 110	Introduction to Communication	
COM 231	Public Speaking	
Take one course		3.0
MAT 110	Mathematical Measurement and Literacy	
MAT 143	Quantitative Literacy	
MAT 152	Statistical Methods I	
MAT 171	Precalculus Algebra	
MAT 271	Calculus I	

#### Major Requirements

DES 110	Architectural Graphics	2.0
DES 112	Building and Construction Systems	3.0
DES 125	Visual Presentation I	2.0

DES 120	CAD for Interior Design	2.0
DES 130	Digital Applications and Interior Design	3.0
DES 210	Professional Practices for Interior Design	2.0
DES 220	Interior Design Fundamentals	3.0
DES 235	Products	3.0
DES 255	History of Interiors and Furnishings I	3.0
DES 242	Kitchen and Bath Design	3.0
WBL 111	Work-Based Learning I	1.0
DES 243	Advanced Kitchen and Bath Design	3.0
Total Credits		39

### Interior Design Certificates (C30220)

#### Interior Design Certificate Specialization in Introduction to Interior Design (C30220-C1)

This certificate is available only to high school students enrolled in Career and College Promise.

#### Major Requirements

DES 110	Architectural Graphics	2.0
DES 125	Visual Presentation I	2.0
DES 135	Principles and Elements of Design I	4.0
DES 225	Textiles for Interiors	3.0
DES 255	History of Interiors and Furnishings I	3.0
Total Credits		14

### Interpreter Education

#### Becoming an American Sign Language - English interpreter

Students who wish to become a professional sign language interpreter must develop fluency in at least two languages. The Interpreter Education curriculum prepares individuals to work as entry-level American Sign Language - English interpreters who provide communication access for people who are Deaf and hard of hearing within a variety of interactive settings. An AAS Degree in Interpreter Education (A55300) is available for students wanting to become ASL-English Interpreters.

The curriculum also provides excellent opportunities for interpreters already working in the field who want to enhance their knowledge and interpretation skills or work toward achieving National Registry of Interpreters for the Deaf (RID) certification.

#### Certification in Basic ASL Communication

Some students take ASL classes to satisfy foreign/modern language requirements in other degree programs and only take 2 or 3 semesters of ASL instruction. Some students seek more in depth ASL instruction, but do not wish to become ASL-English Interpreters. For those students, a Certificate in Basic ASL Communication Skills (C55300-C6) is available to document a social level of ASL proficiency for a variety of employment or personal reasons. ASL 111, ASL 181, ASL 112, ASL 182, ASL 211, ASL 281, ASL 212, ASL 282 are transferable courses under the Comprehensive Articulation Agreement.

#### Little or No Experience in American Sign Language

Students entering the program with little or no experience in communicating in American Sign Language (ASL) must complete ASL foundational courses prior to enrolling in courses for the Interpreter Education Program. Students who have never taken a college-level



American Sign Language course are required to start with Beginning ASL 111 and ASL 181 (lab).

The AAS in Interpreter Education is a 76-credit program that typically takes up to eight semesters to complete because foundational ASL skills must be acquired before learning to interpret between ASL and English.

Because the program is spread out over eight semesters, the program is essentially part-time with most semesters requiring between 9 and 11 credits of study. Because of course sequencing, students wishing to complete the AAS in Interpreter Education are strongly encouraged to begin their studies with ASL 111 and ASL 181 in the Fall term. Students also are strongly encouraged to seek academic advising directly from the program to discuss their program of study and career goals with program faculty.

### Prior College-Level ASL Courses

Students who have taken at least four semesters of college-level ASL course(s) at a regionally accredited institution and possess at least an intermediate level of fluency in American Sign Language, as demonstrated by both the ASL placement test and an intermediate score on the American Sign Language Proficiency Interview (ASLPI Gallaudet), may be able to complete the Interpreter Education program in four semesters. Student who do not have formal collegiate-level ASL course credits must begin their ASL studies in ASL 111 and ASL 181 (lab). There is no credit-by-exam available for ASL courses.

### Employment Opportunities

Entry-level employment for professional interpreters is available in a variety of community and educational settings. Interpreters may consider part-time, full-time, self-employment and private practice positions or apply American Sign Language skills to other related areas of human services.

AAS in Interpreter Education graduates interested in working in the K-12 educational setting are able to be qualified to work in NC Public Schools by obtaining a 3.0 or better on the Educational Interpreters Performance Assessment (EIPA).

AAS Interpreter Education graduates working in settings other than educational or religious, including medical, business, mental health, legal, performing arts, community and video relay/remote settings in NC, must be licensed by the NC Interpreters and Translators Licensing Board (NCITLB). Graduation with an AAS in Interpreter Education is one pathway to obtain a provisional license to begin entry-level employment.

Provisional licenses are renewable for a limited number of years. To convert a provisional NCITLB license to a full license, interpreters must obtain National Interpreter Certification (NIC) through the National Registry of Interpreters for the Deaf (RID). To sit for NIC, interpreters must have a BA/BS degree in any field or a demonstrated equivalency of credits through the RID alternate pathway. Multiple avenues are available for students to meet the requirements for NIC testing that should be discussed with a program advisor.

For specific information about potential positions and wages in Interpreter Education employment, visit the Central Piedmont Career Coach website.

## Interpreter Education (A55300)

### Degree Awarded

The Associate in Applied Science (A55300) degree - Interpreter Education is awarded by the college upon completion of this program.

## Admissions

- A high school diploma or equivalent is required.
- Central Piedmont placement tests are required in English, reading and mathematics. Students must take and pass ENG 111 with a grade of "C" or better, successfully pass a credit by exam, or transfer an ENG 111 equivalent course.
- Students must attain a minimum required score on the American Sign Language Proficiency Interview (ASLPI Gallaudet) in order to major in the Interpreter Education program and take advanced ASL, IPP or WBL prefix courses: ASL 250, IPP 112, IPP 130, IPP 152, IPP 153, IPP 161, and IPP 245.  
Eligible Scores: ASLPI ratings older than one year cannot be accepted for admission into the program.

### Expired Placement Tests

- Students for whom ASL placement or ASLPI tests have expired, must repeat and pass the placement test and/or achieve an intermediate score on the ASLPI to enter or return to the Interpreter Education program.

## Coursework

Many courses have prerequisites or co-requisites; check the Courses section for details.

Coursework includes:

- Acquisition of American Sign Language (ASL): grammar, structure and socio-linguistic properties, cognitive processes associated with interpretation between ASL and English, and Deaf culture
- Ethical decision-making, and
- Acquisition of consecutive and simultaneous interpreting skills.
- Students must earn a grade "C" or better in all ASL, IPP, and WBL prefix courses in order to advance to the next level of courses and for those course credits to count toward satisfying degree completion requirements.

See the Interpreter Education Program website for more information.

Lapse in Proficiency

- Students for whom two or more consecutive terms have lapsed since taking an ASL course, must take a placement interview prior to registering for ASL courses (except for ASL 111 and 181, Beginning ASL 1) to determine proper placement in ASL and IPP (Interpreting) courses. Courses may need to be repeated, if skills have declined significantly. This requirement includes students transferring ASL credit from another college or university.

A student must receive a final grade of "C" or higher in all ASL, IPP, or WBL courses in order to receive credit for that course toward an Interpreter Education A.A.S. (A55300) degree or to advance to the next level of coursework.

## Articulation Agreement

An articulation agreement is in place between the Central Piedmont Interpreter Education program and Gallaudet University - Bachelor degree in Interpretation (BAI). At Gallaudet University, students must apply for acceptance into the program and pass an ASL placement test. Once accepted, Gallaudet guarantees the transfer of Central Piedmont college-

level credits with a grade of “C” or equivalent and requires that a grade of “B” or higher be maintained in all interpreting courses.

## Contact Information

The Interpreter Education program is in the Professional Careers Division at the Cato Campus. For more information about the Interpreting degree or Interpreting courses, ASL courses, ASL placement testing or the ASLPI, contact Program Chair, Ms. Martha Ingel, M.S.Ed., CI/CT at martha.ingel@cpcc.edu (kellie.stewart@cpcc.edu).

### General Education Requirements

ENG 111	Writing and Inquiry	3.0
Select 3 credits of the following:		3.0
ENG 112	Writing and Research in the Disciplines	
ENG 113	Literature-Based Research	
ENG 114	Professional Research & Reporting	
Select 3 credits of the following:		3.0
COM 110	Introduction to Communication	
COM 231	Public Speaking	
Select 3 credits of the following:		3.0
MAT 110	Mathematical Measurement and Literacy	
MAT 121	Algebra/Trigonometry I	
MAT 143	Quantitative Literacy	
MAT 152	Statistical Methods I	
Select 3 credits of the following:		3.0
ART 111	Art Appreciation	
ART 114	Art History Survey I	
ART 115	Art History Survey II	
HUM 120	Cultural Studies	
HUM 130	Myth in Human Culture	
MUS 110	Music Appreciation	
MUS 112	Introduction to Jazz	
PHI 215	Philosophical Issues	
PHI 240	Introduction to Ethics	
REL 110	World Religions	
Select 3 credits of the following:		3.0
ECO 251	Principles of Microeconomics	
ECO 252	Principles of Macroeconomics	
HIS 111	World Civilizations I	
HIS 112	World Civilizations II	
HIS 131	American History I	
HIS 132	American History II	
POL 120	American Government	
PSY 150	General Psychology	
SOC 210	Introduction to Sociology	

### Major Requirements

ASL 111	Elementary ASL I	3.0
ASL 112	Elementary ASL II	3.0
ASL 211	Intermediate ASL I	3.0
ASL 250	Linguistics of American Sign Language	3.0
IPP 111	Introduction to Interpretation	3.0
IPP 112	Comparative Cultures	3.0
IPP 152	ASL/English Translation	3.0
IPP 161	Consecutive Interpreting	5.0

IPP 221	Simultaneous Interpreting I	5.0
WBL 111	Work-Based Learning I	1.0
WBL 115	Work-Based Learning Seminar I	1.0

### Other Major Requirements

ASL 181	ASL Lab 1	1.0
ASL 182	ASL Lab 2	1.0
ASL 212	Intermediate ASL II	3.0
ASL 281	ASL Lab 3	1.0
ASL 282	ASL Lab 4	1.0
IPP 153	Introduction to Discourse Analysis	3.0
IPP 222	Simultaneous Interpreting II	5.0
IPP 240	Ethical Standards and Practices	3.0
WBL 121	Work-Based Learning II	1.0
WBL 125	Work-Based Learning Seminar II	1.0
Select 5 credits of the following:		5.0
ASL 110	Visual Gestural Communication	
ASL 151	Numbers and Fingerspelling	
ASL 221	Advanced American Sign Language I	
ASL 222	Advanced American Sign Language II	
ASL 225	Global Deaf Community	
ASL 252	American Sign Language Classifiers	
ASL 253	American Sign Language Non-Manual Signals	
ASL 260	American Sign Language Semantics	
IPP 130	Analytical Skills for Interpreting	
IPP 245	Educational Interpreting Issues	
CIS 110	Introduction to Computers	
CIS 111	Basic PC Literacy	

Total Credits 76

## No diplomas are offered in Interpreter Education.

### Interpreter Education Certificate (C55300)

#### Interpreter Education Certificate Specialization in Basic ASL Communication Skills (C55300-C6)

This certificate is available through the Career & College Promise program.

The Basic ASL Communication Skills Certificate (C55300-C6) is designed to provide students with the foundational ASL skills needed to continue in the Interpreter Education Program (A55300) AAS degree. It also serves to demonstrate basic ASL Communication proficiency for students whose primary goal is to develop ASL communication skills for either personal or employment-related reasons.

This certificate may be used to demonstrate a particular level of proficiency in ASL to employers, but it will not qualify students to work as Sign Language Interpreters in any setting in the state of NC. Students obtaining the Basic ASL Communication Skills Certificate (C55300-C6), who desire work as interpreters, must continue their studies to complete the degree requirements for the AAS (A55300) Interpreter Education degree.

Middle College and High School students taking the Basic ASL Communication Skills Certificate (C55300-C6), who ultimately wish to complete the AAS (A55300) degree in Interpreter Education, should meet

with a program advisor in the Interpreter Education program to discuss degree map and course sequencing to foster correct course registration and sequence.

#### Major Requirements

ASL 111	Elementary ASL I	3.0
ASL 112	Elementary ASL II	3.0
ASL 151	Numbers and Fingerspelling	1.0
ASL 211	Intermediate ASL I	3.0
ASL 181	ASL Lab 1	1.0
ASL 182	ASL Lab 2	1.0
ASL 212	Intermediate ASL II	3.0
ASL 253	American Sign Language Non-Manual Signals	1.0
ASL 281	ASL Lab 3	1.0
ASL 282	ASL Lab 4	1.0
Total Credits		18

## Lateral Entry Teacher

Lateral entry is an alternate route to teaching which allows school systems to hire candidates with at least a bachelor's degree to teach, based on their commitment to complete a teacher education program over the next three years. Individual plans of study are prescribed for lateral entry teachers who must complete necessary educational coursework required for a professional educator's license. The North Carolina State Board of Education requires up to 10 pedagogical competencies for licensure.

Central Piedmont offers courses for six of these competencies as, either individual courses, or as a Lateral Entry Certificate. All courses are available fully online each semester. In addition, Central Piedmont offers a variety of Lateral Entry Licensure curriculum-specific courses.

The courses are designed for teachers who have been evaluated by a North Carolina RALC-Regional Alternative Licensing Center ([ralc.us/](http://ralc.us/)) and have a signed plan of study to complete licensure requirements. A Lateral Entry Certificate does not replace the need for a professional educator's license.

For admission, frequently asked questions and other information, visit the Lateral Entry website.

For specific information about potential positions and wages in Lateral Entry Teacher employment, visit the Central Piedmont Career Coach website.

**No degrees are offered for Lateral Entry Teacher.**

**No diplomas are offered for Lateral Entry Teacher.**

**Lateral Entry Teacher Certificate (C55430)**

#### Admissions

The program requires students to submit a copy of their undergraduate transcripts and their signed plan of study to the program coordinator.

## Contact Information

For more information, call 704.330.4740 or visit Lateral Entry on the Teaching and Education website.

#### Major Requirements

EDU 131		3.0
EDU 163	Classroom Management and Instruction	3.0
EDU 243	Learning Theory	3.0
EDU 245	Policies and Procedures	3.0
EDU 271	Educational Technology	3.0
EDU 244	Human Growth and Development	3.0
Total Credits		18

## Mechanical Engineering Technology

The Mechanical Engineering Technology curriculum prepares graduates for employment as technicians in the diversified fields of mechanical engineering and manufacturing engineering. Mechanical Engineering technicians assist in the design, development, testing, process design and improvement, and troubleshooting and repair of engineered systems. Graduates should qualify to obtain occupations such as technical service providers, materials and technologies testing service technicians, process improvement technicians, engineering technicians, industrial and technology managers, or research technicians.

Mechanical Engineering Technology course work includes engineering graphics, engineering fundamentals, materials and manufacturing processes, mathematics and physics. Emphasis is placed on the integration of theory and hands-on application of engineering principles. In addition, students study computer applications, critical thinking, planning and problem solving, and oral and written communications.

Graduates of the curriculum find employment opportunities in the manufacturing or service sectors of engineering technology. Engineering technicians may obtain professional certification by application to organizations such as ASQC, SME and NICET.

For specific information about potential positions and wages in Mechanical Engineering Technology employment, visit the Central Piedmont Career Coach website.

## Mechanical Engineering Technology (A40320)

#### Degree Awarded

The Associate in Applied Science Degree - Mechanical Engineering Technology is awarded by the college upon completion of this program. This degree is accepted at some colleges and universities as the first two years of a 2 + 2 bachelor's-level engineering technology program.

#### Admissions

- A high school diploma or equivalent is required. High school students preparing for an engineering technology program should complete courses in algebra, geometry and advanced mathematics. Skills and proficiencies should be developed in writing, computer literacy, and science.
- Placement tests in English and mathematics determine entry-level courses which match individual needs. Developmental Studies English

and mathematics courses are available for students to build basic skills and knowledge.

- A counseling/orientation appointment follows placement testing.
- Many courses have prerequisites or co-requisites; check the Courses section for details.

## Program Accreditation

The Mechanical Engineering Technology Program at Central Piedmont is accredited by the Engineering Technology Accreditation Commission (TAC) of the Accreditation Board for Engineering and Technology (ABET).

## Notes

The Mechanical Engineering Technology curriculum at Central Piedmont features the use of CAD systems in the practical applications of both fundamental and highly specialized mechanical engineering technology principles. Students advance from basic courses to specialized mechanical engineering technology courses. These courses furnish concentrated study in the practical application of state-of-the-art technological knowledge and skills needed in today's high technology industry.

Completion of the program requires that students use college-level algebra, trigonometry and physics in the application of scientific principles to technical problems.

## Contact Information

The Mechanical Engineering Technology Program is in the Engineering Technologies Division. For additional information, visit the Engineering Technologies Division website or contact the Program Chair at 704.330.6614.

### General Education Requirements

ENG 111	Writing and Inquiry	3.0
ENG 114	Professional Research & Reporting	3.0
COM 110	Introduction to Communication	3.0
MAT 171	Precalculus Algebra	4.0
Select 1 of the following:		3.0
ART 111	Art Appreciation	
or ART 114	Art History Survey I	
or ART 115	Art History Survey II	
or HUM 120	Cultural Studies	
or HUM 130	Myth in Human Culture	
or MUS 110	Music Appreciation	
or MUS 112	Introduction to Jazz	
or PHI 215	Philosophical Issues	
or PHI 240	Introduction to Ethics	
or REL 110	World Religions	
Select 1 of the following:		3.0
ECO 251	Principles of Microeconomics	
or ECO 252	Principles of Macroeconomics	
or HIS 111	World Civilizations I	
or HIS 112	World Civilizations II	
or HIS 131	American History I	
or HIS 132	American History II	
or POL 120	American Government	
or PSY 150	General Psychology	

or SOC 210 Introduction to Sociology

### Major Requirements

DFT 154	Intro to Solid Modeling	3.0
EGR 250	Statics/Strength of Mater	5.0
MEC 161	Manufacturing Processes I	3.0
MEC 180	Engineering Materials	3.0
MEC 265	Fluid Mechanics	3.0
PHY 151	College Physics I	4.0
DFT 151	CAD I (Select 1 of the following:)	3.0
or DFT 170	Engineering Graphics	
Other Major Requirements:		
CSC 134	C++ Programming	3.0
ELC 131	Circuit Analysis I	4.0
MAT 172	Precalculus Trigonometry	4.0
MAT 271	Calculus I	4.0
MEC 111	Machine Processes I	3.0
MEC 270	Machine Design	4.0
MEC 275	Engineering Mechanisms	3.0
PHY 152	College Physics II	4.0
Total Credits		72

## No diplomas are offered in Mechanical Engineering Technology.

### Mechanical Engineering Certificates (C40320)

#### Mechanical Engineering Certificate Specialization in Mechanical CAD Operations (C40320-C2)

### Major Requirements

DFT 151	CAD I	3.0
DFT 154	Intro to Solid Modeling	3.0
DFT 170	Engineering Graphics	3.0
MEC 161	Manufacturing Processes I	3.0
Total Credits		12

#### Mechanical Engineering Technology Certificate Specialization in Mechanical Engineering Technology Pathway (C40320-C3)

This program also is available to high school students enrolled in Career and College Promise.

### Major Requirements

DFT 151	CAD I	3.0
DFT 154	Intro to Solid Modeling	3.0
MEC 111	Machine Processes I	3.0
MEC 161	Manufacturing Processes I	3.0
Total Credits		12



## Mechanical Engineering Technology Certificate Specialization in Academic Preparation for Future Engineers (C40320-C4)

### Major Requirements

DFT 151	CAD I	3.0
ENG 111	Writing and Inquiry	3.0
MAT 171	Precalculus Algebra	4.0
MAT 172	Precalculus Trigonometry	4.0
MEC 161	Manufacturing Processes I	3.0
Total Credits		17

## Mechatronics Engineering Technology

The Mechatronics Engineering Technology curriculum prepares individuals for employment as technicians in engineering fields requiring electrical, mechanical and computer skills. Mechatronics Engineering technicians assist in designing, developing, testing, process design and improvement, troubleshooting and repair of complex engineering and manufacturing systems. Emphasis is placed on the integration of theory and hands-on application of engineering principles.

In addition to coursework in engineering fundamentals, basic manufacturing, electricity, computers, mathematics and physics, students develop their critical thinking, planning, problem solving, oral and written communications.

Graduates of the curriculum will find employment opportunities in industrial maintenance and manufacturing including assembly, testing, start-up, troubleshooting, repair and upgrades of machinery and the associated control system. Graduates will be eligible to take the exam for the Siemens Mechatronics Level 1, Siemens Mechatronics Level 2, PMMI Mechatronics Certifications and others as added.

For more details about Central Piedmont Mechatronics visit [cpcc.edu/et/mechatronics](http://cpcc.edu/et/mechatronics).

For specific information about potential positions and wages in Mechatronics Engineering Technology employment, visit the Central Piedmont Career Coach website.

## Mechatronics Engineering Technology (A40350)

### Degree Awarded

The Associate in Applied Science Degree-Mechatronics Engineering Technology is awarded by the College upon completion of this program.

### Admissions

- A high school diploma or equivalent is required. High schools students preparing for an engineering technology program should complete courses in algebra, geometry and advanced mathematics. Skills and proficiencies should be developed in writing, computer literacy and science.
- Placement tests in English and mathematics determine the entry-level courses that match individual needs. Developmental Studies English and mathematics courses are available for students to build basic skills and knowledge.

- A counseling/orientation appointment follows placement testing.
- Many courses have prerequisites or co-requisites; check the Courses section for details.

### Notes

The Mechatronics Engineering Technology curriculum at Central Piedmont provides a basic background in mechanical, electrical and computer skills and, depending on the track, specialized instruction in each of these areas. Topics include CAD, basic computer skills, safety, automation, programmable logic controllers, instrumentation, hydraulics and pneumatics, mechanical drives, motors and controls, and basic electricity. The latest equipment is used to provide skills in these areas.

Two curriculum tracks are available: the Mechanical track and the Electrical track. The Mechanical Track is structured to enable the graduate to focus on the mechanical aspects of a manufacturing or designed system while still having a good understanding of its electrical function. The Electrical Track provides the opposite – a focus on the electrical and control aspects with a good understanding of the mechanical components.

Completion of the program requires that students use college-level algebra, trigonometry and physics in the application of scientific principles to technical problems.

### Contact Information

The Mechatronics Engineering Technology Program is in the Engineering Technologies Division. For additional information, visit the Engineering Technologies Division website or call the Engineering Technologies Division at 704.330.6860.

### General Education Requirements

ENG 111	Writing and Inquiry	3.0
COM 110	Introduction to Communication	3.0
ECO 251	Principles of Microeconomics	3.0
Take 1 of the following:		3.0
ENG 112	Writing and Research in the Disciplines	
or ENG 113	Literature-Based Research	
or ENG 114	Professional Research & Reporting	
Take 1 of the following:		3.0
MAT 121	Algebra/Trigonometry I	
or MAT 171	Precalculus Algebra	
Take 1 of the following:		3.0
ART 111	Art Appreciation	
or ART 114	Art History Survey I	
or ART 115	Art History Survey II	
or HUM 120	Cultural Studies	
or HUM 130	Myth in Human Culture	
or MUS 110	Music Appreciation	
or MUS 112	Introduction to Jazz	
or PHI 215	Philosophical Issues	
or PHI 240	Introduction to Ethics	
or REL 110	World Religions	

### Major Requirements

PHY 131	Physics-Mechanics	4.0
or PHY 151	College Physics I	
ISC 112	Industrial Safety	2.0
EGR 125	Appl Software for Tech	2.0

MEC 130	Mechanisms	3.0
MEC 265	Fluid Mechanics	3.0
ELC 130	Advanced Motors and Controls	3.0
ELC 131	Circuit Analysis I	4.0
ATR 112	Introduction to Automation	3.0
ELC 213	Instrumentation	4.0
ELN 260	Prog Logic Controllers	4.0
PCI 173	Programmable Systems	4.0
or PCI 170	DAQ and Control	
DFT 154	Intro to Solid Modeling	3.0
ISC 212	Metrology	2.0
MEC 110	Introduction to CAD/CAM	2.0
or MAC 121	Introduction to CNC	
MEC 180	Engineering Materials	3.0
WBL 111	Work-Based Learning I	1.0
or MEC 161	Manufacturing Processes I	
MEC 210	Applied Mechanics	3.0
Total Credits		68

## No diplomas are offered in Mechatronics Engineering Technology.

### Mechatronics Engineering Technology Certificates (C40350)

### Mechatronics Engineering Technology Certificate Specialization in Mechatronics Engineering Pathway (C40350-C5)

This certificate is available to high school students enrolled in Career and College Promise.

#### Major Requirements

MAT 121	Algebra/Trigonometry I	3.0
EGR 125	Appl Software for Tech	2.0
ISC 112	Industrial Safety	2.0
ELC 131	Circuit Analysis I	4.0
ELC 130	Advanced Motors and Controls	3.0
Total Credits		14

## Medical Assisting

The Medical Assisting curriculum prepares multi-skilled health care professionals to be qualified to perform administrative, clinical and laboratory procedures.

Course work includes instruction in scheduling appointments, coding and processing insurance accounts, billing, collections, medical transcription, computer operations, assisting with examinations/treatments, performing routine laboratory procedures, electrocardiography, supervised medication administration, and ethical/legal issues associated with patient care.

Advanced credits can be awarded toward completion of requirements for an Associate of Applied Science Degree in Medical Assisting. Individuals desiring a career in Medical Assisting should, if possible, take biology, mathematics, keyboarding and computer courses prior to entering the

program. Students are admitted to the Medical Assisting program for fall and spring semesters.

For specific information about potential positions and wages in Medical Assisting employment, visit the Central Piedmont Career Coach website.

## Medical Assisting (A45400)

### Degree Awarded

A Degree in Medical Assisting is awarded by the college upon completion of the degree requirements.

### Admissions

- Complete a Central Piedmont admissions application.
- Submit high school transcripts as well as any college transcripts (if applicable).
- Take required placement tests.
- Complete any necessary Developmental classes with a "C" or better.
- Students are selected to enter the program. Upon acceptance and enrollment in the program, students must take all courses in the scheduled sequence. Many courses have prerequisites or co-requisites; check the Courses section for details.
- Submit a physical examination (including a drug screen) documenting the ability to complete all program requirements
- Demonstrate word processing proficiency including keying (typing) at an acceptable speed with accurate level and document formatting. The typing speed required is at least 30 wpm with 80 percent accuracy. If a student cannot demonstrate word processing proficiency, the course OST 131 is required.
- Demonstrate basic computer competencies through course work or testing. The division director of Computer Office and Information Systems determines equivalence and competencies. Course CIS 110 is required if course work is needed to demonstrate competencies.

### Notes

- ACA 118 College Study Skills is highly recommended before or with entrance in the Medical Assisting program.
- Progression in this program is dependent on satisfying course prerequisites, co-requisites and maintaining a grade of "C" or better for all courses in the curriculum.
- Students must have current CPR Certification prior to the Practicum (MED 260).
- In addition to tuition, lab fees and textbooks, this program has additional costs that include uniforms, lab coats, personal protective equipment, physical examination including immunizations and drug screening and a Central Piedmont Medical Assisting pin.
- In order to participate in clinical education experiences at health care facilities, students may be required to submit results of a NC state or national criminal background check at their own expense. As a condition of program admission, students may be required to verify that they are United States citizens or are otherwise legally authorized residents of the United States.

### Contact Information

The Medical Assisting program is in the Medical Careers and Cosmetology Division. For more information, visit the Medical Assisting Program website. If further information is needed, contact the program chair at 704.330.6482.

**General Education Requirements**

ENG 111	Writing and Inquiry	3.0
Select one of the following:		3.0
MAT 143	Quantitative Literacy	
MAT 152	Statistical Methods I	
Select 3 credits of the following:		3.0
ENG 112	Writing and Research in the Disciplines	
ENG 113	Literature-Based Research	
ENG 114	Professional Research & Reporting	
Select 3 credits of the following:		3.0
ECO 251	Principles of Microeconomics	
ECO 252	Principles of Macroeconomics	
HIS 111	World Civilizations I	
HIS 112	World Civilizations II	
HIS 131	American History I	
HIS 132	American History II	
POL 120	American Government	
PSY 150	General Psychology	
SOC 210	Introduction to Sociology	
Select one of the following:		3.0
COM 110	Introduction to Communication	
COM 231	Public Speaking	
Select 3 credits of the following:		3.0
ART 111	Art Appreciation	
ART 114	Art History Survey I	
ART 115	Art History Survey II	
HUM 120	Cultural Studies	
HUM 130	Myth in Human Culture	
MUS 110	Music Appreciation	
MUS 112	Introduction to Jazz	
PHI 215	Philosophical Issues	
PHI 240	Introduction to Ethics	
REL 110	World Religions	

**Major Requirements**

MED 110	Orientation to Medical Assisting	1.0
MED 116	Introduction to Anatomy & Physiology	4.0
MED 118	Medical Law and Ethics	2.0
MED 121	Medical Terminology I	3.0
MED 122	Medical Terminology II	3.0
MED 130	Administrative Office Procedures I	2.0
MED 131	Administrative Office Procedures II	2.0
MED 140	Examining Room Procedures I	5.0
MED 150	Laboratory Procedures I	5.0
MED 240	Examining Room Procedures II	5.0
MED 260	MED Clinical Practicum	5.0
MED 262	Clinical Perspectives	1.0
CIS 110	Introduction to Computers	3.0
MED 272	Drug Therapy	3.0
BUS 135	Principles of Supervision	3.0
MED 232	Medical Insurance Coding	2.0
or MED 274	Diet Therapy/Nutrition	
or BIO 155	Nutrition	

Take 3 credits from the following		3.0
MED 270	Symptomatology <small>AAS degree choice</small>	
MED 134	Medical Transcription <small>Medical Scribe Certificate only</small>	
MED 183	Electronic Medical Records I <small>Medical Scribe Certificate only</small>	
Total Credits		70

**Medical Assisting Diploma (D45400)**

**Diploma Awarded**

A Diploma in Medical Assisting is awarded by the college upon completion of the diploma requirements. Graduates of this CAAHEP Accredited program may apply to take the certification examination administered by the American Association of Medical Assistants. Credits from this program can be applied toward requirements for the Associate of Applied Science Degree in Medical Assisting.

Graduates of CAAHEP accredited medical assisting programs may be eligible to sit for the American Association of Medical Assistants' Certification Examination to become Certified Medical Assistants. Employment opportunities include physicians' offices, health maintenance organizations, health departments and hospitals.

**Admissions**

- Complete a Central Piedmont admissions application.
- Submit high school transcripts as well as any college transcripts (if applicable).
- Take required placement tests.
- Complete any necessary Developmental classes with a "C" or better.
- Students must be selected to enter the program. Upon acceptance and enrollment in the program, students must take all courses in the scheduled sequence.
- Many courses have prerequisites or co-requisites; check the Courses section for details.
- A physical examination (including a drug screen) documenting the applicant's ability to complete all program requirements is required
- Students must demonstrate word processing proficiency including keying (typing) at an acceptable speed with accurate level and document formatting. Typing speed required is at least 30 wpm with 80 percent accuracy. If a student cannot demonstrate word processing proficiency, OST 131 is required.
- Students must demonstrate basic computer competencies through course work or testing. The division director of Computer Office and Information Systems will determine equivalence and competencies. CIS 110 is required if course work is needed to demonstrate competencies.
- Students entering or re-entering the MED program must successfully re-take any MED courses taken five or more years prior to the entry or re-entry point.

**Program Accreditation**

The Medical Assisting Diploma Program on Central Campus is accredited by the Commission on Accreditation of Allied Health Education Programs, [caahep.org](http://caahep.org), upon the recommendation of the *Medical Assisting Education Review Board (MAERB)*, Commission on Accreditation of Allied Health Education Programs, 1361 Park Street, Clearwater, FL 33756 727.210.2350.

## Notes

- ACA 118 College Study Skills is highly recommended before or with entrance in the Medical Assisting program.
- Progression in this program is dependent on satisfying course prerequisites, co-requisites and maintaining a grade of "C" or better for all courses in the curriculum.
- Students must have current CPR Certification prior to the Practicum (MED 260).
- In addition to tuition, lab fees and textbooks, this program has additional costs that include uniforms, lab coats, personal protective equipment, physical examination including immunizations and drug screening, application fees for sitting for the Certification Exam and a Central Piedmont Medical Assisting pin.
- In order to participate in clinical education experiences at health care facilities, students may be required to submit results of a NC state or national criminal background check at their own expense. As a condition of program admission, students may be required to verify that they are United States citizens or are otherwise legally authorized residents of the United States.

## Contact Information

The Medical Assisting Program is in the Medical Careers and Cosmetology Division. For more information, visit the Medical Assisting Program website. For further assistance, contact the program chair at 704.330.6482.

### General Education Requirements

ENG 111	Writing and Inquiry	3.0
Select 3 credits of the following:		3.0
COM 110	Introduction to Communication	
COM 120	Intro to Interpersonal Communication	
COM 231	Public Speaking	

### Major Requirements

MED 110	Orientation to Medical Assisting	1.0
MED 118	Medical Law and Ethics	2.0
MED 121	Medical Terminology I	3.0
MED 122	Medical Terminology II	3.0
MED 130	Administrative Office Procedures I	2.0
MED 131	Administrative Office Procedures II	2.0
MED 140	Examining Room Procedures I	5.0
MED 150	Laboratory Procedures I	5.0
MED 260	MED Clinical Practicum	5.0
MED 116	Introduction to Anatomy & Physiology	4.0
MED 262	Clinical Perspectives	1.0
MED 240	Examining Room Procedures II	5.0
MED 272	Drug Therapy	3.0
Total Credits		47

## Medical Assisting Certificates (C45400)

### Health Sciences Certificate Specialization in Fundamentals in Medical Assisting (C45920-C1)

This certificate also is available to high school students enrolled in Career & College Promise.

### Major Requirements

HSC 110	Orientation to Health Careers	1.0
HSC 140	Transcultural Healthcare	2.0
HEA 112	First Aid & CPR	2.0
MED 121	Medical Terminology I	3.0
MED 110	Orientation to Medical Assisting	1.0
MED 118	Medical Law and Ethics	2.0
MED 122	Medical Terminology II	3.0
Total Credits		14

### Medical Assisting Certificate Specialization in Medical Scribe (C45400-C4)

This certificate is offered to credentialed Medical Assistants only.

### Major Requirements

MED 232	Medical Insurance Coding	2.0
MED 270	Symptomatology	3.0
or HIT 226	Principles of Disease	
MED 134	Medical Transcription	3.0
MED 183	Electronic Medical Records I	5.0
Total Credits		13

## Medical Laboratory Technology

The Medical Laboratory Technology curriculum prepares individuals to perform clinical laboratory procedures in chemistry, hematology, microbiology and transfusion medicine that may be used in the maintenance of health and in diagnosis or treatment of disease.

Course work emphasizes mathematical and scientific concepts related to specimen collection, laboratory testing and procedures, quality assurance in reporting/recording and interpreting findings involving tissues, blood or body fluids.

Graduates are eligible to take examinations given by the American Society of Clinical Pathology (ASCP) Board of Certification. Employment opportunities include laboratories in hospitals, physician office laboratories, blood donation centers, industry and research facilities.

For specific information about potential positions and wages in Medical Laboratory Technology employment, visit the Central Piedmont Career Coach website.

### Medical Laboratory Technology (A45420)

#### Degree Awarded

The Associate in Applied Science Degree - Medical Laboratory Technology is awarded by the College upon completion of this program.

### Admissions

- Complete an admissions application to Central Piedmont.
- Submit high school transcripts as well as any college transcripts to Admissions, Records & Registration.
- Take required placement tests.
- Complete any required Developmental classes with a "C" or better.
- Complete at least high school level chemistry course with a "C" or better within the last 10 years.



## Programs of Study

- Complete and submit an MLT admissions packet.
- Complete the TEAS test and submit scores with admissions packet.
- Applicants must present evidence of good physical and mental health. A physical examination documenting the applicant's ability to complete all program requirements is required.
- Students must be selected to enter the Medical Laboratory Technology program. Upon acceptance and enrollment in the program, students must take all courses as scheduled and sequenced.
- Continued progression in the program requires a grade of "C" or better in each MLT prefix course each semester.
- Many courses have prerequisites or co-requisites; check the Courses section for details.

## Program Accreditation

The Medical Laboratory Technology Program is accredited by the National Accrediting Agency for Laboratory Sciences (NAACLS), 5600 N. River Rd., Suite 720, Rosemont, IL 60018-5119. 847.939.3597, 773.714.8880.

## Notes

In addition to tuition and textbooks, costs of this program include: uniforms, and professional white shoes, fluid-resistant lab coat, safety glasses/goggles, a physical examination including immunizations and drug screening.

Students must provide documentation of both health and accident insurance.

In order to participate in clinical education experiences at health care facilities, students may be required to submit results of a N.C. state or national criminal background check at their own expense. As a condition of program admission, students may be required to verify that they are United States citizens or are otherwise legally authorized residents of the United States.

## Contact Information

The Medical Laboratory Technology program is in the Medical Careers and Cosmetology Division. For more information, visit the Medical Careers Laboratory Program website. If further assistance is needed, contact the Program Chair at 704.330.6470.

### General Education Requirements

ENG 111	Writing and Inquiry	3.0
COM 110	Introduction to Communication	3.0
PSY 150	General Psychology	3.0
Select 3 credits of the following:		3.0
ENG 112	Writing and Research in the Disciplines	
ENG 113	Literature-Based Research	
ENG 114	Professional Research & Reporting	
Select 3 credits of the following:		3.0
ART 111	Art Appreciation	
ART 114	Art History Survey I	
ART 115	Art History Survey II	
HUM 120	Cultural Studies	
HUM 130	Myth in Human Culture	
MUS 110	Music Appreciation	
MUS 112	Introduction to Jazz	
PHI 215	Philosophical Issues	

PHI 240	Introduction to Ethics	
REL 110	World Religions	
Select 3 credits of the following:		3.0
MAT 143	Quantitative Literacy	
MAT 152	Statistical Methods I	
<b>Major Requirements</b>		
MLT 110	Introduction to Mlt	3.0
MLT 111	Urinalysis & Body Fluids	2.0
MLT 120	Hematology/Hemostasis I	4.0
MLT 130	Clinical Chemistry I	4.0
MLT 140	Introduction to Microbiology	3.0
MLT 240	Special Clinical Microbiology	3.0
BIO 163	Basic Anatomy & Physiology	5.0
CHM 130	General, Organic, & Biochemistry	3.0
CHM 130A	General, Organic, & Biochemistry Lab	1.0
MLT 251	MLT Practicum I	1.0
MLT 267	MLT Practicum II	8.0
MLT 277	MLT Practicum III	8.0
MLT 126	Immunology and Serology	2.0
MLT 127	Transfusion Medicine	3.0
MLT 220	Hematology/Hemostasis II	3.0
MLT 230	Clinical Chemistry II	3.0
MLT 216	Professional Issues	1.0
Total Credits		75

## No diplomas are offered in Medical Laboratory Technology.

## No certificates are offered in Medical Laboratory Technology.

## Medical Office Administration

This curriculum prepares individuals for employment in medical and other health care-related offices.

Coursework includes medical terminology, information systems, office management, medical coding, billing and insurance, legal and ethical issues plus formatting and word processing. Students learn administrative and support functions and develop skills applicable in medical environments.

Employment opportunities are available in medical and dental offices, hospitals, insurance companies, laboratories, medical supply companies and other health care-related organizations.

For specific information about potential positions and wages in Medical Office Administration employment, visit the Central Piedmont Career Coach website.

## Medical Office Administration (A25310)

### Degree Awarded

The Associate in Applied Science degree - Medical Office Administration is awarded upon completion of this program.

The Medical Office Administration degree is available in two tracks:  
1) Medical Office Administration (A25310), and

2) Medical Office Administration – Medical Billing and Coding (A25310B)

**Admissions**

- Complete an admissions application to Central Piedmont.
- Submit high school transcript and any college transcripts to Central Piedmont Admissions, Records & Registration.
- Take required placement tests to determine placement in English (ENG) and mathematics (MAT) courses.
- A counseling/orientation appointment follows placement testing
- Check the Course Descriptions section to see course prerequisites or co-requisites.
- MED 122 requires permission from the Program Chair of the Medical Assisting program.

**Contact Information**

The Medical Office Administration Program is in the Professional Careers Division. Contact the program office at 704.330.6851. For complete details, visit the Office Administration website.

**Medical Office Administration (A25310)**

**General Education Requirements**

ENG 111	Writing and Inquiry	3.0
Select 3 credits of the following:		3.0
ENG 112	Writing and Research in the Disciplines	
ENG 113	Literature-Based Research	
ENG 114	Professional Research & Reporting	
Select 3 credits of the following:		3.0
COM 110	Introduction to Communication	
COM 231	Public Speaking	
Select 3 credits of the following:		3.0
MAT 110	Mathematical Measurement and Literacy	
MAT 121	Algebra/Trigonometry I	
MAT 143	Quantitative Literacy	
MAT 152	Statistical Methods I	
MAT 171	Precalculus Algebra	
MAT 271	Calculus I	
Select 3 credits of the following:		3.0
ECO 251	Principles of Microeconomics	
ECO 252	Principles of Macroeconomics	
HIS 111	World Civilizations I	
HIS 112	World Civilizations II	
HIS 131	American History I	
HIS 132	American History II	
POL 120	American Government	
PSY 150	General Psychology	
SOC 210	Introduction to Sociology	
Select 3 credits of the following:		3.0
ART 111	Art Appreciation	
ART 114	Art History Survey I	
ART 115	Art History Survey II	
HUM 120	Cultural Studies	
HUM 130	Myth in Human Culture	
MUS 110	Music Appreciation	

MUS 112	Introduction to Jazz	
PHI 215	Philosophical Issues	
PHI 240	Introduction to Ethics	
REL 110	World Religions	

**Major Requirements**

CTS 130	Spreadsheet	3.0
OST 131	Keyboarding	2.0
OST 122	Office Computations	3.0
OST 134	Text Entry & Formatting	3.0
OST 136	Word Processing	3.0
OST 138	Office Applications II	3.0
OST 148	Medical Insurance and Billing	3.0
OST 149	Medical Legal Issues	3.0
OST 164	Office Editing	3.0
OST 184	Records Management	3.0
OST 286	Professional Development	3.0
OST 243	Med Office Simulation	3.0
OST 289	Office Administration Capstone	3.0
Select 3 credit of the following:		3.0

OST 137	Office Applications I	
CIS 110	Introduction to Computers	

Select one of the following sequences: 6.0

MED 121	Medical Terminology I	
& MED 122	and Medical Terminology II	
OR		

OST 141	Medical Office Terms I	
& OST 142	and Medical Office Terms II	

Select 3 credit of the following courses: 3.0

OST 153	Office Finance Solutions	
ACC 115	College Accounting	
ACC 120	Principles of Financial Accounting	

**Technical Electives**

Select 3 credits of the following: 3.0

CTS 112	Windows (TM)	
OST 241	Medical Office Transcription I	
WBL 111	Work-Based Learning I	
WBL 112	Work-Based Learning I	
WBL 121	Work-Based Learning II	
WBL 122	Work-Based Learning II	
OST 236	Advanced Word Processing	
ACA 111	College Student Success	
ACA 118	College Study Skills	
ACA 122	College Transfer Success	

Total Credits 71

**Medical Office Administration – Medical Billing and Coding Track (A25310B)**

**General Education Requirements**

ENG 111	Writing and Inquiry	3.0
Select 3 credits of the following:		3.0
ENG 112	Writing and Research in the Disciplines	
ENG 113	Literature-Based Research	

Programs of Study

ENG 114	Professional Research & Reporting	
Select 3 credits of the following:		3.0
COM 110	Introduction to Communication	
COM 231	Public Speaking	
Select 3 credits of the following:		3.0
MAT 110	Mathematical Measurement and Literacy	
MAT 121	Algebra/Trigonometry I	
MAT 143	Quantitative Literacy	
MAT 152	Statistical Methods I	
MAT 171	Precalculus Algebra	
MAT 271	Calculus I	
Select 3 credits of the following:		3.0
ECO 251	Principles of Microeconomics	
ECO 252	Principles of Macroeconomics	
HIS 111	World Civilizations I	
HIS 112	World Civilizations II	
HIS 131	American History I	
HIS 132	American History II	
POL 120	American Government	
PSY 150	General Psychology	
SOC 210	Introduction to Sociology	
Select 3 credits of the following:		3.0
ART 111	Art Appreciation	
ART 114	Art History Survey I	
ART 115	Art History Survey II	
HUM 120	Cultural Studies	
HUM 130	Myth in Human Culture	
MUS 110	Music Appreciation	
MUS 112	Introduction to Jazz	
PHI 215	Philosophical Issues	
PHI 240	Introduction to Ethics	
REL 110	World Religions	
<b>Major Requirements</b>		
CTS 130	Spreadsheet	3.0
OST 131	Keyboarding	2.0
OST 122	Office Computations	3.0
OST 134	Text Entry & Formatting	3.0
OST 136	Word Processing	3.0
OST 138	Office Applications II	3.0
OST 148	Medical Insurance and Billing	3.0
OST 149	Medical Legal Issues	3.0
OST 164	Office Editing	3.0
OST 184	Records Management	3.0
OST 286	Professional Development	3.0
OST 243	Med Office Simulation	3.0
OST 289	Office Administration Capstone	3.0
Select 3 credit of the following:		3.0
OST 137	Office Applications I	
CIS 110	Introduction to Computers	
Select one of the following sequences:		6.0
MED 121	Medical Terminology I	
& MED 122	and Medical Terminology II	

OR		
OST 141	Medical Office Terms I	
& OST 142	and Medical Office Terms II	
Select 3 credit of the following courses:		3.0
OST 153	Office Finance Solutions	
ACC 115	College Accounting	
ACC 120	Principles of Financial Accounting	
<b>Technical Electives</b>		
Select 3 credits of the following:		3.0
CTS 112	Windows (TM)	
OST 241	Medical Office Transcription I	
WBL 111	Work-Based Learning I	
WBL 112	Work-Based Learning I	
WBL 121	Work-Based Learning II	
WBL 122	Work-Based Learning II	
OST 236	Advanced Word Processing	
ACA 111	College Student Success	
ACA 118	College Study Skills	
ACA 122	College Transfer Success	
Total Credits		71

**No diplomas offered are offered in Medical Office Administration.**

**Medical Office Administration Certificates (C25310)**

**Medical Office Administration Certificate Specialization in Procedural and Diagnostic Coding (C25310-C1)**

**Major Requirements**

OST 141	Medical Office Terms I	3.0
OST 148	Medical Insurance and Billing	3.0
OST 142	Medical Office Terms II	3.0
OST 247	Procedure Coding	3.0
OST 248	Diagnostic Coding	3.0
OST 249	Medical Coding Certification Preparation	3.0
Total Credits		18

**Medical Office Administration Certificate Specialization in Medical Office Administration (C25310-C2)**

**Major Requirements**

OST 131	Keyboarding	2.0
OST 141	Medical Office Terms I	3.0
OST 149	Medical Legal Issues	3.0
OST 142	Medical Office Terms II	3.0
OST 148	Medical Insurance and Billing	3.0
OST 184	Records Management	3.0
Total Credits		17

# Non-Destructive Examination Technology

The Non-Destructive Examination (NDE) Technology curriculum prepares students for careers in non-destructive testing of materials, equipment and/or components. NDE test methods assess an object’s integrity without affecting its function. NDE is used in many industries, including construction, petrochemical, pulp and paper, power generation and aerospace.

Coursework includes ultrasonics, radiography, liquid penetrant, visual, magnetic particle and eddy current examination. Students gain knowledge of these methods through applied theory and hands-on applications.

The NDE curriculum meets classroom and laboratory training requirements of Recommended Practice No. SNT-TC-1A of the American Society for Nondestructive Testing (ASNT), permitting graduates the opportunity to obtain method-specific NDE certification after a few months of on-the-job experience with their employers. Career opportunities exist in applied NDE, material sciences, technical sales and quality control in many industries.

Many of the courses are offered through a Fast Track program (any semester course offered in less than a 16 week semester). When creating a class schedule, pay particular attention to the start/end dates and times of the courses.

For specific information about potential positions and wages in NDE employment, visit the Central Piedmont Career Coach website.

## Non-Destructive Examination Technology (A50350)

### Degree Awarded

An Associate in Applied Science Degree in Non-Destructive Examination Technology is awarded by the college upon completion of this program.

### Admissions

- Completion of a high school diploma or equivalent is required.
- Many courses have prerequisites; check the Courses section for details.

### Contact Information

Non-Destructive Examination Technology is in the Applied Technologies Division. To receive a suggested sequence of courses, contact instructors through the NDE Technology program office at 704.330.4434. For more information, contact the Applied Technologies Division at 704.330.4413.

#### General Education Requirements

ENG 111	Writing and Inquiry	3.0
Select 3 credits of the following:		3.0
ENG 112	Writing and Research in the Disciplines	
ENG 113	Literature-Based Research	
ENG 114	Professional Research & Reporting	
Take 3 credits from the following:		3.0
MAT 121	Algebra/Trigonometry I	
MAT 171	Precalculus Algebra	
Select 3 credits of the following:		3.0
COM 110	Introduction to Communication	

COM 231	Public Speaking	
Select 3 credits of the following:		3.0
ART 111	Art Appreciation	
ART 114	Art History Survey I	
ART 115	Art History Survey II	
HUM 120	Cultural Studies	
HUM 130	Myth in Human Culture	
MUS 110	Music Appreciation	
PHI 215	Philosophical Issues	
PHI 240	Introduction to Ethics	
REL 110	World Religions	
Select 3 credits of the following:		3.0
ECO 251	Principles of Microeconomics	
ECO 252	Principles of Macroeconomics	
HIS 111	World Civilizations I	
HIS 112	World Civilizations II	
HIS 131	American History I	
HIS 132	American History II	
POL 120	American Government	
PSY 150	General Psychology	
SOC 210	Introduction to Sociology	

#### Major Requirements

WLD 141	Symbols and Specifications	3.0
NDE 110	Intro to Nondestructive Examination	3.0
NDE 112	Materials and Processes	3.0
NDE 111	NDE Codes and Specifications	2.0
NDE 142	Visual Testing-1,2	2.0
NDE 143	Liquid Penetrant Testing-1,2	2.0
NDE 152	Magnetic Particle Testing-1,2	2.0
NDE 121	Principles of Ultrasonic Examination-UT Level I	4.0
NDE 122	Angle Beam Examination	4.0
NDE 131	Radiation Safety & Principles of Rt	4.0
NDE 132	RT Industrial Applications	3.0
NDE 153	Eddy Current Testing-1	4.0
NDE 252	Eddy Current Testing (ET)	2.0
CIS 110	Introduction to Computers	3.0
NDE 210	NDE Procedure Development	3.0
	or NDE 192N	
Select one of the following:		4.0
PHY 110 & PHY 110A	Conceptual Physics and Conceptual Physics Lab	
PHY 110A	Conceptual Physics Lab	
PHY 131	Physics-Mechanics	
PHY 151	College Physics I	

#### Technical Electives

Select 7.0 credits from the following:		7.0
DFT 151	CAD I	
DFT 170	Engineering Graphics	
EGR 120	Engineering and Design Graphics	
EGR 125	Appl Software for Tech	
EGR 150	Intro to Engineering	
ELC 111	Introduction to Electricity	



ELC 117	Motors and Controls
ISC 110	Workplace Safety
ISC 112	Industrial Safety
ISC 131	Quality Management
ISC 212	Metrology
MEC 180	Engineering Materials
NDE 222	Advanced Ultrasonic Testing Including Phased Array
NDE 231	Advance Radiographic Testing Techniques
NDE 242	Advanced Visual Testing (VT)
NDE 261	Performance Demonstration Initiative -1, Ultrasonic Testing, Carbon Steel Pipe Welds
NDE 262	Performance Demonstration Initiative -2, Ultrasonic Testing, Stainless Steel Pipe Welds
NDE 263	Perf Demonstration Initiative -3, Ultrasonic Testing, Thru Wall Sizing, Carbon Steel/Stainless Steel
NDE 264	Perf Demonstration Initiative -8, Ultrasonic Testing, Weld Overlay and Dissimilar Metal Thru Wall Sizing
NDE 265	Performance Demonstration Initiative -10 Ultrasonic Testing, Dissimilar Metal Detection and Length Sizing
NUC 110	Nuclear Reactor Systems
WLD 110	Cutting Processes
WLD 111	Oxy-Fuel Welding
WLD 112	Basic Welding Processes
WLD 115	SMAW (Stick) Plate
WLD 143	Welding Metallurgy
WBL 112	Work-Based Learning I
WBL 114	Work-Based Learning I

Total Credits 73

## Nuclear Plant Inspection Diploma (D50350-D1)

The Nuclear Plant Inspection Diploma focuses on the Ultrasonic testing method, specifically as it relates to nuclear power plant piping welds examined during construction and in-service inspections. Applied math and physics are an integral part of NDE and this curriculum. Students gain knowledge of the nuclear industry's Performance Demonstration (PD) examination for the detection and sizing of defects in welds, heat affected zones and base materials. This diploma prepares the student to be successful when taking a PD examination in accordance with ASME Section XI, Appendix VIII, Supplement 3. These PDs are not part of this curriculum course and are administered by the Electric Power Research Institute (EPRI) in Charlotte, N.C.

### Diploma Awarded

A Diploma in Nuclear Plant Inspection is awarded by the college upon successful completion of this program.

Working in nuclear plants or with companies supplying equipment for these plants requires additional security and adherence to specific work requirements (criminal convictions and substance use criteria). These additional requirements or security clearances are not included in this program. Some of these requirements are located in the United States Code of Federal Regulations (CFR) Title 10, Energy:

- 10 CFR Part 26, Fitness for Duty Programs
- 10 CFR 73.56, Personnel Access Authorization Requirements for Nuclear Power Plants

### General Education Requirements

ENG 111	Writing and Inquiry	3.0
MAT 121	Algebra/Trigonometry I	3.0
COM 110	Introduction to Communication	3.0

### Major Requirements

NDE 110	Intro to Nondestructive Examination	3.0
NDE 112	Materials and Processes	3.0
NDE 121	Principles of Ultrasonic Examination-UT Level I	4.0
NDE 122	Angle Beam Examination	4.0
PHY 131	Physics-Mechanics	4.0
NDE 221	UT Industrial Applications	4.0
NDE 261	Performance Demonstration Initiative -1, Ultrasonic Testing, Carbon Steel Pipe Welds	7.0
NDE 262	Performance Demonstration Initiative -2, Ultrasonic Testing, Stainless Steel Pipe Welds	7.0
NDE 263	Perf Demonstration Initiative -3, Ultrasonic Testing, Thru Wall Sizing, Carbon Steel/Stainless Steel	3.0

Total Credits 48

## Non-Destructive Examination Technology Certificates (C50350)

- Non-Destructive Examination Technology Certificate with a Specialization in Ultrasonic Examination (C50350-C1) (p. 213)
- Non-Destructive Examination Technology Certificate with a Specialization in Visual and Penetrant Examination (C50350-C2) (p. 213)
- Non-Destructive Examination Technology Certificate with a Specialization in Radiographic Examination (C50350-C4) (p. 213)
- Non-Destructive Examination Technology Certificate (p. 213) With a Specialization in Advanced Nuclear Plant Inspection of Ferritic and Stainless Steel Piping Welds (C50350-C5) (p. 213)
- Non-Destructive Examination Technology Certificate (p. 213) With a Specialization in Advanced Nuclear Plant Inspection - UT Inspection and Sizing of Piping and Dissimilar Welds (C50350-C6) (p. 213)
- Non-Destructive Examination Technology Certificate with a Specialization in Level 1 and Level 2 Surface Examination (C50350-C8) (p. 213)
- Non-Destructive Examination Technology Certificate with a Specialization in Magnetic Particle & Eddy Current Examinations (C50350-C9) (p. 213)
- Non-Destructive Examination Technology Certificate with a Specialization in Advanced Visual Testing (C50350-10) (p. 213)

These are special, short-term certificates offered in the NDET program. The courses listed are taken from the NDET diploma and 0 degree programs. These certificates are issued in accordance with Central Piedmont policy and certify that students have successfully completed the courses (GPA of 2.0 or higher) within the certificate program. These are not certificates to perform NDE. These certificates, along with the process of NDE qualification and testing, are performed by the employer, not Central Piedmont.

Students may earn certificates which build to earning a diploma or degree. Students may earn certificates in the same semester that they earn a degree or diploma.

### Non-Destructive Examination Technology Certificate with a Specialization in Ultrasonic Examination (C50350-C1)

**Major Requirements**

MAT 121	Algebra/Trigonometry I	3.0
NDE 110	Intro to Nondestructive Examination	3.0
NDE 112	Materials and Processes	3.0
NDE 121	Principles of Ultrasonic Examination-UT Level I	4.0
NDE 122	Angle Beam Examination	4.0
Total Credits		17

### Non-Destructive Examination Technology Certificate with a Specialization in Visual and Penetrant Examination (C50350-C2)

**Major Requirements**

NDE 110	Intro to Nondestructive Examination	3.0
NDE 112	Materials and Processes	3.0
WLD 141	Symbols and Specifications	3.0
NDE 142	Visual Testing-1,2	2.0
NDE 143	Liquid Penetrant Testing-1,2	2.0
Total Credits		13

### Non-Destructive Examination Technology Certificate with a Specialization in Radiographic Examination (C50350-C4)

**Major Requirements**

NDE 110	Intro to Nondestructive Examination	3.0
NDE 112	Materials and Processes	3.0
NDE 131	Radiation Safety & Principles of Rt	4.0
NDE 132	RT Industrial Applications	3.0
MAT 121	Algebra/Trigonometry I	3.0
Total Credits		16

### Non-Destructive Examination Technology Certificate With a Specialization in Advanced Nuclear Plant Inspection of Ferritic and Stainless Steel Piping Welds (C50350-C5)

The Non-Destructive Examination Technology Certificate Specialization in Ultrasonic Examination (C50350-C1) is a prerequisite for this certificate.

**Major Requirements**

NDE 221	UT Industrial Applications	4.0
NDE 261	Performance Demonstration Initiative -1, Ultrasonic Testing, Carbon Steel Pipe Welds	7.0
NDE 262	Performance Demonstration Initiative -2, Ultrasonic Testing, Stainless Steel Pipe Welds	7.0
Total Credits		18

### With a Specialization in Advanced Nuclear Plant Inspection - UT Inspection and Sizing of Piping and Dissimilar Welds (C50350-C6)

**Major Requirements**

NDE 263	Perf Demonstration Initiative -3, Ultrasonic Testing, Thru Wall Sizing, Carbon Steel/Stainless Steel	3.0
NDE 264	Perf Demonstration Initiative -8, Ultrasonic Testing, Weld Overlay and Dissimilar Metal Thru Wall Sizing	3.0
NDE 265	Performance Demonstration Initiative -10 Ultrasonic Testing, Dissimilar Metal Detection and Length Sizing	3.0
NDE 221	UT Industrial Applications	4.0
Total Credits		13

### Non-Destructive Examination Technology Certificate with Specialization in Level 1 and Level 2 Surface Examination (C50350-C8)

NDE 110	Intro to Nondestructive Examination	3.0
NDE 112	Materials and Processes	3.0
NDE 142	Visual Testing-1,2	2.0
NDE 143	Liquid Penetrant Testing-1,2	2.0
NDE 152	Magnetic Particle Testing-1,2	2.0
Total Credits		12

### Non-Destructive Examination Certificate Specialization in Magnetic Particle & Eddy Current Examinations (C50350-C9)

**Required Courses**

NDE 110	Intro to Nondestructive Examination	3.0
NDE 112	Materials and Processes	3.0
NDE 153	Eddy Current Testing-1	4.0
NDE 252	Eddy Current Testing (ET)	2.0
WLD 141	Symbols and Specifications	3.0
Total Credits		15

### Non-Destructive Examination Certificate in Advanced Visual Testing (C50350-C10)

**Major Requirements**

NDE 110	Intro to Nondestructive Examination	3.0
NDE 112	Materials and Processes	3.0
NDE 142	Visual Testing-1,2	2.0
NDE 242	Advanced Visual Testing (VT)	3.0
WLD 141	Symbols and Specifications	3.0
NUC 110	Nuclear Reactor Systems	3.0
Total Credits		17

## Nurse Aide

The Nurse Aide curriculum prepares individuals to work under the supervision of licensed healthcare professionals in performing nursing care and services for persons of all ages.

Coursework emphasizes growth and development throughout the life span, personal care, vital signs, communication, nutrition, medical asepsis, therapeutic activities, accident and fire safety, household environment and equipment management as well as employment skills and family resources and services.

Graduates of this curriculum may be eligible to be listed on the registry as a Nursing Aide I and Nursing Aide II. They may be employed in home health agencies, hospitals, clinics, nursing homes, extended care facilities and doctor's offices.

For specific information about potential positions and wages in Nurse Aide employment, visit the Central Piedmont Career Coach website.

## No degrees are offered for Nurse Aide.

## No diplomas are offered for Nurse Aide.

## Nurse Aide Certificate (C45840)

### Certificate Awarded

A Nurse Aide Certificate is awarded by the college upon completion of certificate requirements.

### Admission Steps

1. Complete an application to the college.
2. Take the required placement tests and earn the following scores:  
MATH - at least a 7 on Developmental Math exams DMA 010, DMA 020, and DMA 030  
READING / ENGLISH - a composite Developmental Reading (DRE) exam score of 151+.  
Students also may qualify by passing these courses: DMA 010, DMA 020, and DMA 030, plus DRE 098.  
Visit the Testing and Assessment website to schedule a test, take practice tests, access review materials or for placement testing information,

### Admission Credentials

- In order to participate in clinical education experiences at health care facilities, students are required to submit results of a NC state and/or national criminal background check at their own expense. As a condition of admission, students are required to verify they are United States citizens or otherwise legally authorized residents of the United States.
- The following required forms are not part of the registration process, but must be submitted in the first class meeting of the Nurse Aide Program:
  - a. Authorizations
  - b. Criminal Background Check Request
  - c. Immunizations
  - d. Medical physical
  - e. Urine Drug Screening Results
- Previous students, who have had a name change due to marriage or divorce, must take their social security card and current driver's license to Records & Registration on the second floor of the Central High Building on Central Campus to have their student records updated.

## Credentials for Nurse Aide Courses

- In addition to tuition, lab fees and textbooks, courses have additional costs that include uniforms, personal protective equipment, physical examinations, immunizations, and drug screening.
- To take the Nurse Aide II course (NAS102), students must have completed the NC state-approved Nurse Aide I Program (NAI) and be on the current active listing of the NC Nurse Aide I Registry.
- Students in NAS 102 must have current CPR certification by an American Heart Association Healthcare provider prior to beginning clinical experience.
- Students must be at least 18 years of age by the time of clinicals.

## Contact Information

The Nurse Aide Certificate is in the Health & Human Services Division. For information, visit the Nurse Aide website.

### Major Requirements

NAS 101	Nurse Aide I	6.0
NAS 102	Nurse Aide II	6.0
Total Credits		12

## Nursing, Associate Degree

The Christa A. Overcash Associate Degree Nursing curriculum provides knowledge, skills and strategies to integrate safety and quality into nursing care, to practice in a dynamic environment, and to meet individual needs which impact health, quality of life and achievement of potential. Coursework includes and builds upon the domains of healthcare, nursing practice and the holistic individual. Content emphasizes the nurse as a member of the interdisciplinary team, providing safe, individualized care while employing evidence-based practice, quality improvement and informatics.

Graduates of this program are eligible to apply to take the National Council Licensure Examination (NCLEX-RN), which is required for practice as a Registered Nurse. Employment opportunities are vast within the global healthcare system and may include positions within acute, chronic, extended, industrial and community healthcare facilities

For specific information about potential positions and wages in Nursing employment, visit the Central Piedmont Career Coach website.

The Christa A. Overcash Associate Degree Nursing program has full approval by the North Carolina Board of Nursing.

North Carolina Board of Nursing  
4516 Lake Boone Trail  
Raleigh, NC 27607  
Phone: 919.782.3211  
Fax: 919.781.9461

This Associate Degree Nursing education program is nationally accredited. It is accredited by the Accreditation Commission for Education in Nursing (ACEN).

ACEN  
3343 Peachtree Road NE, Suite 850  
Atlanta, Georgia 30326  
Phone: 404.975.5000  
Fax: 404.975.5020

## Nursing, Associate Degree (A45110)

### Degree Awarded

An Associate in Applied Science Degree in Nursing is awarded by the college upon completion of this program.

### Program Admission Steps

- Complete admissions application to Central Piedmont.
- Submit high school transcripts and any college transcripts to Central Piedmont Admissions, Records and Registration.
- Meet with college counselors on Central Campus, in the Central High Building, Room 212. Call for an appointment at 704.330.6433.
- Complete an application to the nursing program.
- Show proof of meeting the required cut scores for ATI Teas admission test.
- Show proof of having taken a N.C. state approved nurse aide program.
- Provide a copy of the current nurse aide listing from N.C. nurse aide registry.

Application information may be found on the Associate Degree Nursing website.

### Additional Costs and Requirements

In addition to tuition and textbooks, costs of this program include the following:

- cost of ATI Teas admission test
- uniforms, lab coat
- stethoscope
- a physical examination including drug screening test.
- immunizations such as tetanus toxoid, hepatitis B vaccinations, TB test, blood test (i.e., VDRL, rubella titer, etc.)
- current CPR certification
- criminal background check, FBI fingerprinting; Participation in clinical education experiences at area health care facilities require students to submit results of a criminal background check and FBI fingerprinting at their own expense.
- application fees for N.C. State Board of Nursing National Council Licensure Examination; Students must provide a certificate of health and accident insurance.

All course work must be completed with a grade of "C" or better.

Students are required to verify that they are a citizen of the United States or an otherwise legally authorized resident.

### Contact Information

The Christa A. Overcash Associate Degree Nursing program is in the Nursing Division. For more information, contact the Nursing Division at 704.330.6284.

#### General Education Requirements

ENG 111	Writing and Inquiry	3.0
ENG 114	Professional Research & Reporting	3.0
PSY 150	General Psychology	3.0
BIO 168	Anatomy and Physiology I	4.0
Select 3 credits of the following:		3.0

MAT 143	Quantitative Literacy	
MAT 171	Precalculus Algebra	
Select 3 credits of the following:		3.0
ART 111	Art Appreciation	
ART 114	Art History Survey I	
ART 115	Art History Survey II	
MUS 110	Music Appreciation	
MUS 112	Introduction to Jazz	
PHI 215	Philosophical Issues	
PHI 240	Introduction to Ethics	
<b>Major Requirements</b>		
NUR 111	Introduction to Health Concepts (Prerequisite: Acceptance into the Nursing Program)	8.0
NUR 112	Health-Illness Concepts	5.0
NUR 113	Family Health Concepts	5.0
NUR 114	Holistic Health Concepts	5.0
NUR 211	Health Care Concepts	5.0
NUR 212	Health System Concepts	5.0
NUR 213	Complex Health Concepts	10.0
BIO 169	Anatomy and Physiology II	4.0
PSY 241	Developmental Psychology	3.0
Total Credits		69

**No diplomas are offered in Nursing.**

**No certificates are offered in Nursing.**

## Occupational Therapy Assistant

The Occupational Therapy Assistant curriculum prepares individuals to work under the supervision of a registered or licensed occupational therapist in screening, assessing, planning and implementing treatment as well as documenting progress for clients receiving occupational therapy services.

Course work focuses on human growth and development, conditions which interfere with activities of daily living, theory and process of occupational therapy, individual or group treatment activities, therapeutic use of self, activity analysis as well as grading or adapting activities and environments.

Graduates may be eligible to take the national certification examination for practice as a certified occupational therapy assistant. Employment opportunities include hospitals, rehabilitation facilities, long-term or extended care facilities, sheltered workshops, schools, home health programs and community programs.

For specific information about potential positions and wages in Occupational Therapy Assistant employment, visit the Central Piedmont Career Coach website.

## Occupational Therapy Assistant (A45500)

### Degree Awarded

An Associate in Applied Science Degree is awarded by the college upon completion of this program.



## Admissions

- A high school diploma or equivalent is required.
- Complete a general admission application to Central Piedmont.
- Take required placement tests.
- Meet with an academic advisor or counselor for preliminary counseling.
- Take the Test of Essential Academic Skills (TEAS).
- Submit all official high school and college transcripts to Admissions, Records & Registration.
- Complete any required Preparatory courses with grade of “C” or better.
- Upon acceptance and enrollment in the program, students must take all courses as scheduled and sequenced.
- Continued progression in the program requires a grade of “C” or better in every course.
- Complete a physical examination (including drug screen) documenting ability to complete all program requirements.
- Many courses have prerequisites or co-requisites; check the Courses section for details.
- Fieldwork II placements must be completed within 12 months of completion of didactic course work.

## Program Accreditation

The Occupational Therapy Assistant program is accredited by the Accreditation Council for Occupational Therapy Education (ACOTE) of the American Occupational Therapy Association (AOTA), located at 4720 Montgomery Lane, Suite 200, Bethesda, MD 20814-3449. The council may be contacted online in care of AOTA or by phone at 301-652-AOTA (2682).

## Notes

Students spend more than 600 hours of supervised clinical training in hospitals, skilled nursing facilities, pediatric clinics and other settings to gain invaluable hands-on experience that supplements and complements traditional classroom learning.

Graduates of the program are eligible to sit for the national certification examination for the occupational therapy assistant administered by the National Board for Certification in Occupational Therapy (NBCOT). After successful completion of this exam, individuals are Certified Occupational Therapy Assistants (COTA).

In addition, all states require licensure in order to practice. Eligibility for state licenses usually is based on results of the NBCOT Certification Examination.

Please Note: a felony conviction may affect a graduate’s eligibility to sit for the NBCOT certification examination or to attain state licensure.

## Contact Information

The Occupational Therapy Assistant program is in the Health Sciences Division. For more information, visit the Occupational Therapy Assistant. For further assistance, contact the Program Chair at 704.330.6424.

### General Education Requirements

ENG 111	Writing and Inquiry	3.0
PSY 150	General Psychology	3.0
Select one of the following:		3.0

ENG 112	Writing and Research in the Disciplines	
ENG 113	Literature-Based Research	
ENG 114	Professional Research & Reporting	
Take 3 credits from the following:		3.0
COM 110	Introduction to Communication	
COM 231	Public Speaking	
Take 3 credits from the following:		3.0
MAT 110	Mathematical Measurement and Literacy	
MAT 143	Quantitative Literacy	
MAT 152	Statistical Methods I	
MAT 171	Precalculus Algebra	
Select 3 credits of the following:		3.0
ART 111	Art Appreciation	
ART 114	Art History Survey I	
ART 115	Art History Survey II	
HUM 120	Cultural Studies	
HUM 130	Myth in Human Culture	
MUS 110	Music Appreciation	
MUS 112	Introduction to Jazz	
PHI 215	Philosophical Issues	
PHI 240	Introduction to Ethics	
REL 110	World Religions	

### Major Requirements

OTA 110	Fundamentals of OT	3.0
OTA 120	OT Media I	2.0
OTA 130	Assessment Skills	3.0
OTA 140	Professional Skills I	1.0
OTA 150	Pediatric Concepts and Interventions	3.0
OTA 161	Fieldwork I-Placement 1	1.0
OTA 162	Fieldwork I-Placement 2	1.0
OTA 163	Fieldwork I-Placement 3	1.0
OTA 170	Physical Conditions	3.0
OTA 180	Psychosocial Conditions	3.0
OTA 220	OT Media II	3.0
OTA 240	Professional Skills II	1.0
OTA 250	Adult Concepts and Interventions	3.0
OTA 260	Level II Fieldwork Placement 1	6.0
OTA 261	Level II Fieldwork Placement 2	6.0
PSY 241	Developmental Psychology	3.0
PSY 281	Abnormal Psychology	3.0
BIO 168	Anatomy and Physiology I	4.0
or BIO 165	Anatomy and Physiology I	
Other Major Requirements:		
OTA 280	Professional Transitions	1.0
OTA 135	Kinesiology	1.0
BIO 169	Anatomy and Physiology II	4.0
or BIO 166	Anatomy and Physiology II	
MED 120	Survey of Medical Terminology	2.0
or MED 121	Medical Terminology I	
Total Credits		76

**No diplomas are offered for Occupational Therapy Assistant.**

**No certificates are offered for Occupational Therapy Assistant.**

**Office Administration**

The Office Administration curriculum prepares individuals for positions in administrative support careers. It equips office professionals to respond to the demands of a dynamic computerized workplace.

Students complete courses designed to develop proficiency in the use of integrated software, oral and written communication, analysis and coordination of office duties and systems and other support topics. Emphasis is placed on non-technical as well as technical skills.

Graduates should qualify for employment in a variety of positions in business, government and industry. Job classifications range from entry-level to supervisor to middle management. With appropriate work experience, graduates may apply for certification as a Certified Professional Secretary® (CPS®)/Certified Administrative Professional® (CAP®) through the International Association of Administrative Professionals (IAAP).

For specific information about potential positions and wages in Office Administration employment, visit the Central Piedmont Career Coach website.

**Office Administration (A25370)**

**Degree Awarded**

The Associate in Applied Science Degree - Office Administration is awarded by the college upon completion of this program.

**Admissions**

- Complete an admissions application to Central Piedmont.
- Submit high school transcript and any college transcripts.
- Take required placement tests to determine placement in English (ENG) and mathematics (MAT) courses.
- Consult with a counselor by calling the Advisement & Student Success Center on Cato Campus at 704.330.2722 ext. 7801.
- Check the Courses section to determine prerequisites or co-requisites required to register for courses.

**Contact Information**

The Office Administration program is in the Professional Careers Division. For more information, call the Office Administration Program Chair at 704.330.6851 or visit the Medical, Legal and Office Administration website.

**General Education Requirements**

ENG 111	Writing and Inquiry	3.0
COM 110	Introduction to Communication	3.0
Select one of the following:		3.0
ENG 112	Writing and Research in the Disciplines	
ENG 113	Literature-Based Research	
ENG 114	Professional Research & Reporting	
Select one of the following:		3.0
MAT 110	Mathematical Measurement and Literacy	

MAT 121	Algebra/Trigonometry I	
MAT 143	Quantitative Literacy	
MAT 152	Statistical Methods I	
MAT 171	Precalculus Algebra	
MAT 271	Calculus I	
Select 3 credits of the following:		3.0
ART 111	Art Appreciation	
ART 114	Art History Survey I	
ART 115	Art History Survey II	
HUM 120	Cultural Studies	
HUM 130	Myth in Human Culture	
MUS 110	Music Appreciation	
MUS 112	Introduction to Jazz	
PHI 215	Philosophical Issues	
PHI 240	Introduction to Ethics	
REL 110	World Religions	
Select 3 credits of the following:		3.0
ECO 251	Principles of Microeconomics	
ECO 252	Principles of Macroeconomics	
HIS 111	World Civilizations I	
HIS 112	World Civilizations II	
HIS 131	American History I	
HIS 132	American History II	
POL 120	American Government	
PSY 150	General Psychology	
SOC 210	Introduction to Sociology	

**Major Requirements**

CTS 130	Spreadsheet	3.0
OST 164	Office Editing	3.0
OST 184	Records Management	3.0
OST 136	Word Processing	3.0
OST 289	Office Administration Capstone	3.0
OST 131	Keyboarding	2.0
OST 134	Text Entry & Formatting	3.0
OST 135	Advanced Text Entry and Formatting	3.0
OST 236	Advanced Word Processing	3.0
OST 286	Professional Development	3.0
OST 138	Office Applications II	3.0
OST 122	Office Computations	3.0
OST 284	Emerging Technologies	2.0
CIS 110	Introduction to Computers	3.0
Select one of the following courses:		3.0
OST 153	Office Finance Solutions	
ACC 115	College Accounting	
ACC 120	Principles of Financial Accounting	

**Technical Electives**

Select 6 credits of the following:		6.0
CTS 112	Windows (TM)	
WBL 111	Work-Based Learning I	
WBL 112	Work-Based Learning I	
WBL 122	Work-Based Learning II	
BUS 135	Principles of Supervision	

BUS 110	Introduction to Business
ACA 118	College Study Skills
ACA 111	College Student Success
ACA 122	College Transfer Success
SPA 111 & SPA 181	Elementary Spanish I and Spanish Lab 1

Total Credits 67

## Office Administration Diplomas (D25370)

### Office Administration Diploma in General Clerical Skills (D25370-D1)

The purpose of the General Clerical Skills curriculum is to prepare the individual to enter clerical office occupations. This purpose is fulfilled through skill development in the areas of word processing, records management and ten-key skills. Through these skills and through development of personal competencies and qualities, individuals are able to function effectively in office-related activities at the entry-level. The courses in this diploma can be applied toward the A.A.S. degree in Office Administration.

Graduates should qualify for entry-level employment in general clerical positions in business, government and industry.

#### Diploma Awarded

The Diploma in General Clerical Skills – Office Administration is awarded by the College upon completion of this program.

#### Admissions

- A high school diploma or equivalent is required.
- Many courses have prerequisites or co-requisites; check the Courses section for details.

#### Contact Information

The Office Administration Diploma is in the Professional Careers Division. For more information, call the Office Administration Program Chair at 704.330.6851 or visit the Medical, Legal and Office Administration website.

#### General Education Requirements

ENG 111	Writing and Inquiry	3.0
Select 3 credits of the following:		3.0
ANT 210	General Anthropology	
ANT 220	Cultural Anthropology	
ANT 221	Comparative Cultures	
ECO 151	Survey of Economics	
ECO 251	Principles of Microeconomics	
ECO 252	Principles of Macroeconomics	
GEO 111	World Regional Geography	
HIS 111	World Civilizations I	
HIS 112	World Civilizations II	
HIS 131	American History I	
HIS 132	American History II	
POL 120	American Government	
POL 210	Comparative Government	
POL 220	International Relations	
PSY 150	General Psychology	

PSY 241	Developmental Psychology
PSY 281	Abnormal Psychology
SOC 210	Introduction to Sociology
SOC 213	Sociology of the Family
SOC 225	Social Diversity

#### Major Requirements

OST 164	Office Editing	3.0
OST 184	Records Management	3.0
OST 136	Word Processing	3.0
CIS 111 or CIS 110	Basic PC Literacy Introduction to Computers	2.0
OST 286	Professional Development	3.0
OST 131	Keyboarding	2.0
ACC 110	Ten-Key Skills	1.0
CTS 112	Windows (TM)	2.0
OST 134	Text Entry & Formatting	3.0
OST 137	Office Applications I	3.0
OST 138	Office Applications II	3.0
WBL 112	Work-Based Learning I	2.0

Total Credits 36

### Office Administration Diploma in Word Processing Operator (D25370-D2)

The Word Processing curriculum prepares individuals to create, edit and proof a variety of documents accurately. Upon completion of this program, students will possess knowledge of word processing, database, spreadsheet and electronic mail software. The courses in this diploma can be applied toward the A.A.S. degree in Office Administration.

Graduates should qualify for entry-level employment in word processing positions in business, government and industry.

#### Diploma Awarded

The Diploma in Word Processing Operator – Office Administration is awarded by the College upon completion of this program.

#### Admissions

- A high school diploma or equivalent is required.
- Many courses have prerequisites or co-requisites; check the Courses section for details.

#### Contact Information

The Word Processing Operator Diploma is in the Professional Careers Division. For more information, call the Office Administration Program Chair at 704.330.6851 or visit the Medical, Legal and Office Administration website.

#### General Education Requirements

ENG 111	Writing and Inquiry	3.0
Select 3 credits of the following:		3.0
ANT 210	General Anthropology	
ANT 220	Cultural Anthropology	
ANT 221	Comparative Cultures	
ECO 151	Survey of Economics	
ECO 251	Principles of Microeconomics	

ECO 252	Principles of Macroeconomics
HIS 111	World Civilizations I
HIS 112	World Civilizations II
HIS 131	American History I
HIS 132	American History II
POL 120	American Government
POL 210	Comparative Government
POL 220	International Relations
PSY 150	General Psychology
PSY 241	Developmental Psychology
PSY 281	Abnormal Psychology
SOC 210	Introduction to Sociology
SOC 213	Sociology of the Family
SOC 225	Social Diversity
GEO 111	World Regional Geography

**Major Requirements**

OST 164	Office Editing	3.0
OST 184	Records Management	3.0
CIS 110	Introduction to Computers	3.0
OST 286	Professional Development	3.0
OST 131	Keyboarding	2.0
OST 136	Word Processing	3.0
OST 134	Text Entry & Formatting	3.0
OST 236	Advanced Word Processing	3.0
OST 137	Office Applications I	3.0
OST 138	Office Applications II	3.0
CTS 112	Windows (TM)	2.0
OST 233	Office Publications Design	3.0
CTS 130	Spreadsheet	3.0
WBL 112	Work-Based Learning I	2.0-3.0
or BUS 110	Introduction to Business	

Total Credits 45-46

**Office Administration Certificates (C25370)**

- Office Administration Certificate with a Specialization in Receptionist Skills (C25370-C1) (p. 219)
- Office Administration Certificate with a Specialization in Software Use (C25370-C2) (p. 219)
- Office Administration Certificate with a Specialization in Office Finance (C25370-C3) (p. 220)
- Office Administration Specialist Certificate (C25370-C5) (p. 220)

**Office Administration Certificate with a Specialization in Receptionist Skills (C25370-C1)**

The Receptionist curriculum prepares individuals to receive and route telephone calls, greet visitors and handle filing, mailing, copying and faxing. In addition, students would possess basic keyboarding and computer skills. The courses in this certificate can be applied toward the A.A.S. degree in Office Administration.

Graduates should qualify for entry-level employment in receptionist positions in business, government and industry.

**Certificate Awarded**

The Certificate in Receptionist Skills – Office Administration is awarded by the college upon completion of this program.

**Admissions**

- A high school diploma or equivalent is required.
- Many courses have prerequisites or co-requisites; check the Courses section for details.

**Contact Information**

The Receptionist Skills Certificate is in the Professional Careers Division. For more information, call the Office Administration Program Chair at 704.330.6851 or visit the Medical, Legal and Office Administration website.

**Major Requirements**

OST 131	Keyboarding	2.0
OST 137	Office Applications I	3.0
OST 164	Office Editing	3.0
OST 136	Word Processing	3.0
OST 286	Professional Development	3.0
OST 138	Office Applications II	3.0
Total Credits		17

**Office Administration Certificate with a Specialization in Software Use (C25370-C2)**

The Certificate in Software Use provides students with an introductory knowledge of software usage to enable them to function effectively in an office environment using the touch keying system. Students gain knowledge of word processing, database, spreadsheets and electronic mail applications. The courses in this certificate can be applied toward the A.A.S. degree in Office Administration.

Graduates should qualify for employment in entry-level positions in business, government and industry.

**Certificate Awarded**

The Certificate in Software Use – Office Administration is awarded by the college upon completion of this program.

**Admissions**

- A high school diploma or equivalent is required.
- Many courses have prerequisites or co-requisites; check the Courses section for details.

**Contact Information**

The Software Use Certificate is in the Professional Careers Division. For more information, call the Office Administration Program Chair at 704.330.6851 or visit the Medical, Legal and Office Administration website.

**Major Requirements**

CTS 130	Spreadsheet	3.0
OST 131	Keyboarding	2.0
OST 136	Word Processing	3.0
OST 137	Office Applications I	3.0
OST 138	Office Applications II	3.0



OST 236	Advanced Word Processing	3.0
Total Credits		17

### Office Administration Certificate Specialization in Office Finance (C25370-C3)

#### Major Requirements

CIS 110	Introduction to Computers	3.0
OST 131	Keyboarding	2.0
OST 122	Office Computations	3.0
OST 286	Professional Development	3.0
CTS 130	Spreadsheet	3.0
OST 153	Office Finance Solutions	3.0
Total Credits		17

### Office Administration Specialist Certificate (C25370-C5)

The Office Administration Specialist curriculum prepares individuals for entry level positions in a professional office environment by developing the following skills:

- Speed and accuracy in keyboarding
- Email functions: scheduling appointments and meetings, creating contacts, maintaining calendars
- Career strategies
- Introduction to Computers
- Processing electronic documents

The courses in this certificate can be applied toward the A.A.S. degree in Office Administration.

#### Certificate Awarded

The Office Administration Specialist Certificate is awarded by the college upon completion of this program.

#### Admissions

- A high school diploma or equivalent is required.

#### Contact Information

The Office Administration Specialist Certificate is in the Professional Careers Division. For more information, call the Office Administration Program Chair at 704.330.6851 or visit the Medical, Legal and Office Administration website.

#### Major Requirements

CIS 110	Introduction to Computers	3.0
OST 131	Keyboarding	2.0
OST 134	Text Entry & Formatting	3.0
OST 136	Word Processing	3.0
OST 137	Office Applications I	3.0
OST 286	Professional Development	3.0
Total Credits		17

## Ophthalmic Medical Personnel

The Ophthalmic Medical Personnel program prepares individuals to perform ophthalmic procedures under the supervision of a licensed

physician specializing in Ophthalmology. Course work includes: lecture, laboratory, clinical training in ocular measurements, ocular testing, lensometry, administering topical and oral medications, eye care, and caring for instruments.

Graduates are employed in medical institutions, clinics, or physician practices.

Graduates may qualify as candidates to take the Joint Commission on Allied Health Personnel in Ophthalmology National Certification Exam. Diploma graduates may be eligible for certifications as Certified Ophthalmic Assistants and Associate degree graduates may be eligible for certifications as Certified Ophthalmic Technicians.

For specific information about potential positions and wages in Ophthalmic Medical Personnel employment, visit the Central Piedmont Career Coach website.

## Ophthalmic Medical Personnel (A45210)

### Degree Awarded

The Associate in Applied Science degree - Ophthalmic Medical Personnel is awarded by the college upon completion of this program.

#### Admissions

- Complete a Central Piedmont Admissions Form.
- Submit an official high school diploma as well as college transcripts to the Student Records.
- Complete Central Piedmont placement tests for course placement.
- Schedule an appointment and meet with an academic advisor.

#### Notes

Progression in this program is dependent upon a grade of "C" or better in all general education courses, as well as major and related courses.

Students must be certified by the American Heart Association in "Health Care Provider Level" CPR or by the American Red Cross in "CPR for the Professional Rescuer" prior to registering for an OPH course.

In order to participate in clinical education experiences at health care facilities, students may be required to submit results of a NC state or national criminal background check at their own expense. As a condition of program admission, students may be required to verify that they are United States citizens or are an otherwise legally authorized residents of the United States.

#### Contact Information

The Ophthalmic Medical Personnel program is in the Medical Careers Division. For more information, visit the Ophthalmic Medical Personnel Program website. For further assistance, contact the Program Chair at 704.330.2722, ext. 3444.

#### General Education Requirements

ENG 111	Writing and Inquiry	3.0
ENG 112	Writing and Research in the Disciplines	3.0
COM 231	Public Speaking	3.0
MAT 143	Quantitative Literacy	3.0
PSY 150	General Psychology	3.0

Select 3 credits from the following:		3.0
ART 111	Art Appreciation	
ART 114	Art History Survey I	
ART 115	Art History Survey II	
HUM 120	Cultural Studies	
HUM 130	Myth in Human Culture	
MUS 110	Music Appreciation	
MUS 112	Introduction to Jazz	
PHI 215	Philosophical Issues	
PHI 240	Introduction to Ethics	
REL 110	World Religions	

<b>Major Requirements</b>		
OPH 113	Introduction to Diseases of the Eye	2.0
OPH 114	Basic Ophthalmic Pharmacology	2.0
OPH 115	Ophthalmic Clinical Procedures I	2.0
OPH 116	Ophthalmic Medical Assistant Practicum I	6.0
OPH 117	Ophthalmic Clinical Procedures II	2.0
OPH 118	Ophthalmic Patient Care	2.0
OPH 119	Ophthalmic Optics & Basic Refractometry	2.0
OPH 120	Ophthalmic Medical Assistant Practicum II	6.0
OPH 150	Intro to Ophthalmic Medical Assisting	2.0
OPH 151	Ocular Anatomy & Physiology	2.0
OPH 217	Ophthalmic Clinical Procedures III	2.0
OPH 218	Advanced Ophthalmic Patient Care	2.0
OPH 219	Ophthalmic Optics and Refractometry II	2.0
OPH 220	Ophthalmic Medical Assistant Practicum III	8.0
BIO 163	Basic Anatomy & Physiology	5.0
MED 121	Medical Terminology I	3.0
Total Credits		68

## Ophthalmic Medical Personnel (D45210) Diploma Awarded

A diploma in Ophthalmic Medical Personnel is awarded by the college upon completion of this program.

### Admissions

- Complete a Central Piedmont Admissions Form.
- Submit an official high school diploma as well as college transcripts to the Student Records.
- Complete Central Piedmont placement tests for course placement.
- Schedule an appointment and meet with an academic advisor.

### Notes

Progression in this program is dependent upon a grade of “C” or better in all general education courses, as well as major and related courses.

Students must be certified by the American Heart Association in “Health Care Provider Level” CPR or by the American Red Cross in “CPR for the Professional Rescuer” prior to registering for an OPH course.

In order to participate in clinical education experiences at health care facilities, students may be required to submit results of a NC state or national criminal background check at their own expense. As a condition of program admission, students may be required to verify that they are

United States citizens or are an otherwise legally authorized residents of the United States.

## Contact Information

The Ophthalmic Medical Personnel program is in the Medical Careers Division. For more information, visit the Ophthalmic Medical Personnel Program website. For further assistance, contact the program chair at 704.330.2722, ext. 3444.

### General Education Requirements

ENG 111	Writing and Inquiry	3.0
PSY 150	General Psychology	3.0
Select 3.0 Credits from the following		3.0
COM 110	Introduction to Communication	
COM 231	Public Speaking (Select 3.0 Credits from the following)	

### Major Requirements

OPH 150	Intro to Ophthalmic Medical Assisting	2.0
OPH 151	Ocular Anatomy & Physiology	2.0
OPH 113	Introduction to Diseases of the Eye	2.0
OPH 114	Basic Ophthalmic Pharmacology	2.0
OPH 115	Ophthalmic Clinical Procedures I	2.0
OPH 116	Ophthalmic Medical Assistant Practicum I	6.0
OPH 117	Ophthalmic Clinical Procedures II	2.0
OPH 118	Ophthalmic Patient Care	2.0
OPH 119	Ophthalmic Optics & Basic Refractometry	2.0
OPH 120	Ophthalmic Medical Assistant Practicum II	6.0
MED 121	Medical Terminology I	3.0
Total Credits		40

## No certificates are offered for Ophthalmic Medical Personnel.

## Paralegal Technology

### Approved by American Bar Association and North Carolina Bar Certified

**Paralegals may not provide legal services directly to the public, except as permitted by law.**

The Paralegal Technology curriculum is designed to prepare individuals to work under the supervision of attorneys by performing routine legal tasks and assisting with substantive legal work. Students are taught how to perform routine legal tasks and to assist with substantive legal work. The program offers both an Associate Degree and a Post Baccalaureate Diploma for those who hold a bachelor's degree.

Course work includes substantive and procedural legal knowledge in such areas as civil litigation, legal research and writing, real estate, family law, wills, estates, trusts and commercial law. The program also offers a review course that prepares students for the North Carolina State Paralegal Certification Exam. Required courses also include subjects such as English and computer utilization.

Graduates are trained to assist attorneys in various areas of practice in drafting, filing legal documents, writing and research, and office management. Employment opportunities are available in private law firms,

## Programs of Study

governmental agencies, banks, insurance agencies and other business organizations.

A paralegal/legal assistant may not practice law, give legal advice, or represent clients in a court of law.

For specific information about potential positions and wages in Paralegal employment, visit the Central Piedmont Career Coach website.

## Paralegal Technology (A25380)

### Degree Awarded

An Associate in Applied Science in Paralegal Technology degree is awarded by the college upon completion of this program.

### Admissions

- A high school diploma or equivalent is required.
- Placement test scores will determine placement in English and mathematics courses.
- A counseling/orientation appointment follows placement testing.
- A student must complete ENG 111 with a minimum grade of "C" or better prior to registering for any LEX courses.
- LEX 110 is also a prerequisite to all other LEX courses except LEX 120 and LEX 140. In addition to taking LEX 110, students should take LEX 120 and LEX 140 prior to taking other LEX courses.
- Many courses have prerequisites or co-requisites; check the Courses section for details.
- A student must receive a final grade of "C" or higher in a LEX course in order to receive course credit towards a Paralegal Technology A.A.S. degree (A25380).

### Contact Information

The Paralegal Technology Program is in the Professional Careers Division. For more information, visit the Central Piedmont Paralegal Program website. The Paralegal Technology program chair can be reached by email at [Nina.Neal@cpcc.edu](mailto:Nina.Neal@cpcc.edu) or by phone at 704.330.4857. A college counselor can be reached by calling the Student Success Center on Cato Campus at 704.330.2722, ext. 7801.

#### General Education Requirements

ENG 111	Writing and Inquiry	3.0
ENG 112	Writing and Research in the Disciplines	3.0
ENG 114	Professional Research & Reporting	3.0
COM 231	Public Speaking	3.0
or COM 110	Introduction to Communication	
Select 3 credits of the following:		3.0
ART 111	Art Appreciation	
ART 114	Art History Survey I	
ART 115	Art History Survey II	
HUM 120	Cultural Studies	
HUM 130	Myth in Human Culture	
MUS 110	Music Appreciation	
MUS 112	Introduction to Jazz	
PHI 215	Philosophical Issues	
PHI 240	Introduction to Ethics	
REL 110	World Religions	

Select one of the following: 3.0

MAT 143	Quantitative Literacy	
MAT 152	Statistical Methods I	
Select 3 credits of the following:		3.0
ECO 251	Principles of Microeconomics	
ECO 252	Principles of Macroeconomics	
HIS 111	World Civilizations I	
HIS 112	World Civilizations II	
HIS 131	American History I	
HIS 132	American History II	
POL 120	American Government	
PSY 150	General Psychology	
SOC 210	Introduction to Sociology	

#### Major Requirements

LEX 110	Intro to Paralegal Study	2.0
LEX 120	Legal Research/Writing I	3.0
LEX 130	Civil Injuries	3.0
LEX 140	Civil Litigation I	3.0
LEX 150	Commercial Law I	3.0
LEX 210	Real Property I	3.0
LEX 240	Family Law	3.0
LEX 250	Wills, Estates, & Trusts	3.0
LEX 141	Civil Litigation II	3.0
LEX 121	Legal Research/Writing II	3.0
OST 136	Word Processing	3.0
LEX 280	Ethics & Professionalism	2.0
LEX 271	Law Office Writing	2.0
CIS 110	Introduction to Computers	3.0
Select one of the following:		4.0
ACC 115	College Accounting	
ACC 120	Principles of Financial Accounting	

#### Technical Elective

Select 6 credits of the following:		6.0
WBL 111	Work-Based Learning I	
WBL 112	Work-Based Learning I	
WBL 121	Work-Based Learning II	
WBL 122	Work-Based Learning II	
LEX 160	Criminal Law & Procedure	
LEX 170	Administrative Law	
LEX 211	Real Property II	
LEX 220	Corporate Law	
LEX 260	Bankruptcy and Collections	
LEX 285	Workers' Compensation Law	
LEX 180	Case Analysis & Reasoning	
LEX 270	Law Office Management/Technology	
LEX 283	Investigation	
LEX 289	U.S. Constitutional Law	
LEX 281	Intellectual Property	
LEX 282	Immigration Law	
LEX 151	Commercial Law II	
LEX 273	North Carolina Certified Paralegal Review Course	

Total Credits 70

## Paralegal Technology Diploma (D25380)

### Diploma Awarded

A post-baccalaureate diploma in Paralegal Technology is awarded by the college upon completion of this program.

### Admissions

- This program is open only to students who have a bachelor's degree from an accredited college or university and have successfully completed an English course equivalent to or higher than ENG 111 with a minimum grade of "C" or better.
- An official undergraduate transcript must be on file with the College's records department.
- ENG 111 with a "C" or better is a prerequisite to all LEX courses. LEX 110 is a prerequisite to all other LEX courses except LEX 120 and LEX 140. In addition to taking LEX 110, students should take LEX 120 and LEX 140 in their first semester and prior to taking other LEX courses.
- A student must receive a final grade of "C" or higher in an LEX course in order to receive course credit towards a Paralegal Technology Post-Baccalaureate diploma (D25380).

### Contact Information

The Paralegal Technology Program is in the Professional Careers Division. For more information, visit the Central Piedmont Paralegal Program website. The Paralegal Technology program chair can be reached by email at [Nina.Neal@cpcc.edu](mailto:Nina.Neal@cpcc.edu) or by phone at 704.330.4857. A college counselor can be reached by calling the Student Success Center on Cato Campus at 704.330.2722, ext. 7801.

#### General Education Requirements

ENG 111	Writing and Inquiry	3.0
COM 231	Public Speaking	3.0
or COM 110	Introduction to Communication	

#### Major Requirements

LEX 110	Intro to Paralegal Study	2.0
LEX 120	Legal Research/Writing I	3.0
LEX 140	Civil Litigation I	3.0
LEX 141	Civil Litigation II	3.0
LEX 121	Legal Research/Writing II	3.0
OST 136	Word Processing	3.0
LEX 280	Ethics & Professionalism	2.0
LEX 150	Commercial Law I	3.0
LEX 210	Real Property I	3.0
LEX 270	Law Office Management/Technology	2.0
CIS 110	Introduction to Computers	3.0

#### Technical Elective

Select 5 credits of the following:		5.0
WBL 111	Work-Based Learning I	
WBL 112	Work-Based Learning I	
WBL 121	Work-Based Learning II	
WBL 122	Work-Based Learning II	
LEX 160	Criminal Law & Procedure	
LEX 170	Administrative Law	
LEX 211	Real Property II	

LEX 220	Corporate Law	
LEX 260	Bankruptcy and Collections	
LEX 285	Workers' Compensation Law	
LEX 180	Case Analysis & Reasoning	
LEX 130	Civil Injuries	
LEX 240	Family Law	
LEX 250	Wills, Estates, & Trusts	
LEX 283	Investigation	
LEX 289	U.S. Constitutional Law	
LEX 271	Law Office Writing	
LEX 281	Intellectual Property	
LEX 282	Immigration Law	
LEX 151	Commercial Law II	
LEX 273	North Carolina Certified Paralegal Review Course	
Total Credits		41

**No certificates are offered in Paralegal Technology.**

## Pharmacy Technology

The Pharmacy Technology curriculum prepares individuals to assist the pharmacist in duties that a pharmacy technician can legally perform and to function within the boundaries prescribed by the pharmacist and the employment agency.

Course work includes and builds upon the domains of health care and pharmaceutical principals. Content emphasizes the pharmacy technician as a member of the interdisciplinary team providing safe, individualized care while employing evidence-based practice, quality improvement and informatics. Students prepare prescription medications, mix intravenous solutions and other specialized medications, update patient profiles, maintain inventories, package medications and gather data used by pharmacists to monitor drug therapy.

Graduates of this program are eligible to apply to take the certification exam with the Pharmacy Technician Certification Board (PTCB). Employment opportunities are vast within the global health care system. Employment opportunities include retail, hospitals, nursing homes, research laboratories and pharmaceutical manufacturing facilities.

For specific information about potential positions and wages in Pharmacy Technology employment, visit the Central Piedmont Career Coach website.

## Pharmacy Technology (A45580)

### Degree Awarded

The Associate in Applied Science degree – Pharmacy Technology is awarded by the College upon completion of this program.

### Admissions

- Complete an admissions application to Central Piedmont.
- Submit high school transcripts, as well as any college transcripts, to Admissions, Records and Registration.
- Take required placement tests.
- Consult with a counselor or advisor to review placement test scores, program information and select courses for registration.



## Programs of Study

- Complete any required Developmental Education courses with a grade of 'C' or better.
- Complete and submit a Pharmacy Technology AAS degree application by the deadline date.
- Students must take the TEAS exam and have scores to submit with their AAS degree applications.
- Many courses have prerequisites or co-requisites; check the Courses section for details.
- Progression in this program is dependent upon a grade of "C" or better in all general education courses, as well as major and related courses.

Applicants to the Pharmacy Technology AAS degree program are selected on a "best prepared" basis. The point system was implemented as an objective means for evaluating Pharmacy Technology applicants. Applicants are ranked based upon points earned, and the students with the highest number of points will be selected each year. Admission points are assigned according to the applicant's documented record. Criteria for selection include scores on standardized tests, past academic performance and experience in the field of interest.

## Notes

Students must demonstrate basic computer competencies through course work or testing. The division director of Computer Office and Information Systems determines equivalent competency.

Costs of this program, in addition to tuition and textbooks, include uniforms, physical examination, criminal background check and specific vaccinations. The student must provide proof of health and accident insurance.

The North Carolina State Board of Pharmacy may request information regarding having been charged with or convicted of violating any controlled substances laws or charged or disciplined by any licensing or permitting authority, federal or state on the application for registration. The Board of Pharmacy may decide not to register an individual based on the results of an investigation. A candidate may be disqualified for Pharmacy Technician Certification Board (PTCB) certification upon the disclosure or discovery of:

- criminal conduct involving the candidate.
- State Board of Pharmacy registration or licensure action involving the candidate.
- violation of a PTCB Certification policy, including but not limited to the Code of Conduct.

In order to participate in clinical education experiences at health care facilities, students are required to submit results of a criminal background check at their own expense. As a condition of program admission, students are required to verify that they are United States citizens or are otherwise legally authorized residents of the United States. Students also are required, at their own expense, to submit to a 13-panel drug screen.

## Contact Information

The Pharmacy Technology program is in the Medical Careers and Cosmetology Division. For more information, visit the Pharmacy Technology Program website. For further assistance, contact the Program Chair at 704.330.6432.

### General Education Requirements

ENG 111	Writing and Inquiry	3.0
PSY 150	General Psychology	3.0

Select 3.0 credits from the following: 3.0

ENG 112	Writing and Research in the Disciplines
ENG 113	Literature-Based Research
ENG 114	Professional Research & Reporting

Select 3 credits of the following: 3.0

ART 111	Art Appreciation
ART 114	Art History Survey I
ART 115	Art History Survey II
HUM 120	Cultural Studies
HUM 130	Myth in Human Culture

MUS 110	Music Appreciation
MUS 112	Introduction to Jazz
PHI 215	Philosophical Issues
PHI 240	Introduction to Ethics

REL 110 World Religions

Select 3 credits of the following: 3.0

COM 110	Introduction to Communication
COM 231	Public Speaking

Select 3 credits of the following: 3.0

MAT 143	Quantitative Literacy
MAT 152	Statistical Methods I
MAT 171	Precalculus Algebra

### Major Requirements

PHM 110	Introduction to Pharmacy	3.0
PHM 111	Pharmacy Practice I	4.0
PHM 115	Pharmacy Calculations	3.0
PHM 118	Sterile Products	4.0
PHM 120	Pharmacology I	3.0
PHM 125	Pharmacology II	3.0
PHM 140	Trends in Pharmacy	2.0
PHM 150	Hospital Pharmacy	4.0
PHM 155	Community Pharmacy	3.0
PHM 160	Pharm Dosage Forms	3.0
PHM 165	Pharmacy Prof Practice	2.0
PHM 132	Pharmacy Clinical	2.0
PHM 134	Pharmacy Clinical	4.0
PHM 138	Pharmacy Clinical	8.0
PHM 265	Professional Issues	3.0
MED 120	Survey of Medical Terminology	2.0
or MED 121	Medical Terminology I	

Take 1 course from the following: 3.0-5.0

BIO 161	Introduction to Human Biology
BIO 110	Principles of Biology
BIO 111	General Biology I
BIO 112	General Biology II
BIO 163	Basic Anatomy & Physiology
BIO 168	Anatomy and Physiology I

Total Credits 74-76

## Pharmacy Technology Diploma (D45580)

The Diploma Program prepares graduates to perform essential functions in various areas of retail pharmacy practice. The program provides employers with competent technicians to assist the pharmacist within

their scope of practice and to perform necessary unsupervised daily tasks including basic to extensive medication preparation, dosage calculations, compounding, patient information maintenance, inventory and quality control. Graduates of the diploma program are eligible to take the National Certification Exam administered by the Pharmacy Technician Certification Board (PTCB) to become a Certified Pharmacy Technician.

#### General Education Requirements

BIO 161	Introduction to Human Biology	3.0-5.0
or BIO 110	Principles of Biology	
or BIO 111	General Biology I	
or BIO 112	General Biology II	
or BIO 163	Basic Anatomy & Physiology	
or BIO 168	Anatomy and Physiology I	
MAT 143	Quantitative Literacy	3.0-4.0
or MAT 152	Statistical Methods I	
or MAT 171	Precalculus Algebra	
or MAT 172	Precalculus Trigonometry	
CIS 110	Introduction to Computers	3.0
ENG 111	Writing and Inquiry	3.0
COM 110	Introduction to Communication	3.0
or COM 231	Public Speaking	

#### Major Requirements

PHM 110	Introduction to Pharmacy	3.0
PHM 111	Pharmacy Practice I	4.0
PHM 115	Pharmacy Calculations	3.0
PHM 120	Pharmacology I	3.0
PHM 140	Trends in Pharmacy	2.0
PHM 118	Sterile Products	4.0
PHM 125	Pharmacology II	3.0
PHM 165	Pharmacy Prof Practice	2.0
PHM 134	Pharmacy Clinical	4.0
Total Credits		43-46

The Pharmacy Technology curriculum prepares individuals to assist the pharmacist in duties that a pharmacy technician can legally perform and to function within the boundaries prescribed by the pharmacist and the employment agency.

Course work includes and builds upon the domains of health care and pharmaceutical principals. Content emphasizes the pharmacy technician as a member of the interdisciplinary team providing safe, individualized care while employing evidence-based practice, quality improvement and informatics. Students prepare prescription medications, mix intravenous solutions and other specialized medications, update patient profiles, maintain inventories, package medications and gather data used by pharmacists to monitor drug therapy.

Graduates of this program are eligible to apply to take the certification exam with the Pharmacy Technician Certification Board (PTCB) Employment opportunities are geared toward the retail sector.

## Health Sciences Certificate (C45940)

### Health Sciences Certificate with a Specialization in Fundamentals in Pharmacy Technology (C45940-C1)

This certificate also is available to high school students through the Career and College Promise program.

#### Major Requirements

HSC 110	Orientation to Health Careers	1.0
HSC 140	Transcultural Healthcare	2.0
HEA 112	First Aid & CPR	2.0
MED 121	Medical Terminology I	3.0
PHM 110	Introduction to Pharmacy	3.0
PHM 140	Trends in Pharmacy	2.0
Total Credits		13

## Physical Therapist Assistant

The Physical Therapist Assistant curriculum prepares graduates to work in direct patient care settings under the supervision of physical therapists. Assistants work to improve or restore function by alleviation or prevention of physical impairment and perform other essential activities in a physical therapy department.

Course work includes normal human anatomy and physiology, the consequences of disease or injury and physical therapy treatment of a variety of patient conditions affecting humans throughout their lifespan.

Graduates are eligible to take the PTA National Physical Therapy Exam (NPTE) for licensure in whichever state they plan to work. Employment is available in general hospitals, rehabilitation centers, outpatient orthopedic clinics, school systems, geriatric health care facilities and home health agencies.

For specific information about potential positions and wages in Physical Therapist Assistant employment, visit the Central Piedmont Career Coach website.

## Physical Therapist Assistant (A45640)

### Degree Awarded

The Associate in Applied Science Degree - Physical Therapist Assistant is awarded by the college upon completion of this program.

### Admissions

- A high school diploma or equivalent is required.
- Complete a general admission application to Central Piedmont.
- Take required placement tests.
- Meet with an academic advisor or counselor for preliminary counseling.
- Take the Test of Essential Academic Skills (TEAS).
- Submit all official high school transcripts and any college transcripts to Admissions, Records & Registration.
- Complete any required Preparatory courses with a grade of "C" or better.
- Complete and submit the Physical Therapist Assistant application by the deadline.

## Programs of Study

- Upon acceptance and enrollment in the program, students must take all courses as scheduled and sequenced.
- Continued progression in the program requires a grade of “C” or better in every course.
- A physical examination (including a drug screen) documenting the applicant’s ability to complete all program requirements is required.
- Many courses have prerequisites or co-requisites; check the Courses section for details.

## Program Accreditation

The Physical Therapist Assistant program at Central Piedmont is accredited by the Commission on Accreditation in Physical Therapy Education (CAPTE) of the American Physical Therapy Association (APTA).

## Notes

In addition to tuition and textbooks, costs of the program include: uniforms, travel to clinical sites, liability and accident insurance, health insurance, a fee for CPR/First Aid certification and/or re-certification, a licensure application fee and the cost of a physical examination, including immunizations and blood tests. Current CPR and First Aid certification is required prior to all clinical courses.

In order to participate in clinical education experiences at health care facilities, students are required to submit results of a N.C. state or national criminal background check at their own expense.

## Contact Information

The Physical Therapist Assistant program is in the Health Sciences Division. For more information, visit the Physical Therapy Assistant website. For further assistance, contact the Program Chair at 704.330.6746.

### General Education Requirements

ENG 111	Writing and Inquiry	3.0
PSY 150	General Psychology	3.0
Select 3 credits of the following:		3.0
ENG 112	Writing and Research in the Disciplines	
ENG 113	Literature-Based Research	
ENG 114	Professional Research & Reporting	
Select 3 credits of the following:		3.0
ART 111	Art Appreciation	
ART 114	Art History Survey I	
ART 115	Art History Survey II	
HUM 120	Cultural Studies	
HUM 130	Myth in Human Culture	
MUS 110	Music Appreciation	
MUS 112	Introduction to Jazz	
PHI 215	Philosophical Issues	
PHI 240	Introduction to Ethics	
REL 110	World Religions	
Select 3 credits of the following:		3.0
MAT 110	Mathematical Measurement and Literacy	
MAT 143	Quantitative Literacy	
MAT 152	Statistical Methods I	
MAT 171	Precalculus Algebra	

Select 3 credits of the following:		3.0
COM 110	Introduction to Communication	
COM 231	Public Speaking	
<b>Major Requirements</b>		
PTA 110	Intro to Physical Therapy	3.0
PTA 125	Gross & Functional Anatomy	5.0
PTA 135	Pathology	4.0
PTA 145	Therapeutic Procedures	4.0
PTA 212	Health Care/Resources	2.0
PTA 215	Therapeutic Exercise	3.0
PTA 222	Professional Interactions	2.0
PTA 225	Intro to Rehabilitation	4.0
PTA 235	Neurological Rehab	5.0
PTA 245	PTA Clinical III	4.0
PTA 255	PTA Clinical IV	4.0
PTA 165	PTA Clinical I	3.0
PTA 185	PTA Clinical II	3.0
BIO 168	Anatomy and Physiology I	4.0
or BIO 165	Anatomy and Physiology I	
BIO 169	Anatomy and Physiology II	4.0
or BIO 166	Anatomy and Physiology II	
PTA 270	PTA Topics	1.0
MED 121	Medical Terminology I	3.0
or MED 120	Survey of Medical Terminology	
Total Credits		76

**No diplomas are offered for Physical Therapy Assistant.**

**No certificates are offered for Physical Therapy Assistant.**

## Polysomnography

The Polysomnography program prepares individuals with the knowledge and skills to critically assess, plan, implement and evaluate clinical care and management of sleep disorders and daytime alertness.

Students in this program learn to use sleep technology as part of a team, under the general supervision of a licensed physician, by applying a unique body of knowledge and methodological skills involved in the education, evaluation, treatment and follow-up of sleep disorders in patients of all ages. The curriculum includes instruction in performing tests such as the Polysomnogram, PAP Titration Studies, Multiple Sleep Latency Test, Maintenance of Wakefulness Test, Actigraphy, Home Sleep Testing and others used by a physician to diagnose and treat sleep disorders. These tests include the recording, monitoring and analysis of electroencephalography (EEG), electromyography (EMG), electrooculography (EOG), electrocardiography (ECG), respiration, blood oxygen levels and other physiological parameters. Testing procedures may involve application and adjustment of therapeutic modalities such as supplemental oxygen or positive airway pressure and include application of techniques, equipment, and procedures that are safe, aseptic, preventative, and restorative. Interpretive knowledge is required to recognize and respond to respiratory, cardiac, or behavioral events that may occur during testing procedures. Students also learn to provide supportive services related to the ongoing treatment of sleep

related problems. The professional realm of this support includes patient instruction on the use of devices for the treatment of breathing problems during sleep and helping individuals develop sleeping habits that promote good sleep hygiene.

Polysomnographic Technologists may be employed in facility-based or private sleep diagnostic and treatment centers, durable medical equipment companies, medical specialty sales, research, and more.

For specific information about potential positions and wages in Polysomnography employment, visit the Central Piedmont Career Coach website.

## Polysomnography (A45670)

### Degree Awarded

The Associate in Applied Science Degree – Polysomnography is awarded by the college upon completion of this program.

### Admissions

- Complete an admissions application to Central Piedmont.
- Submit high school transcripts, as well as any college transcripts, to Admissions, Records & Registration.
- Take required placement tests.
- Complete any required Developmental classes with a “C” or better.
- Complete and submit a Polysomnography admissions packet.
- Complete the TEAS test and submit scores with admissions packet.
- Applications must present evidence of good physical and mental health appropriate for students to meet the clinical standards of the profession. A physical examination documenting the applicant’s ability to complete all program requirements is required.
- Students must be selected to enter the Polysomnography program. Upon acceptance and enrollment in the program, students must take all courses as scheduled and sequenced.
- Continued progression in the program requires a grade of “C” or better in each PSG prefix course in each semester.
- Many courses have prerequisites or co-requisites; check the Courses section for details.

Refer to Admission Steps for Degree-Seeking or Transfer students from the orange Get Started icon on the college home page.

In any Associate Degree Health Sciences program for which there are more applicants who have completed pre-admission requirements than there are positions, admission points are assigned according to the applicant’s documented record. Criteria for selection includes scores on the TEAS test, past academic performance and experience in the field of interest.

### Additional Expenses and Requirements

In addition to tuition and textbooks, costs of this program include: uniforms, and professional shoes, a physical examination including immunizations and drug screening.

Student must provide documentation of both health related and accident insurance.

In order to participate in clinical education experiences at health care facilities, students may be required to submit results of a North Carolina

state or national criminal background check at their own expense. As a condition of program admission, students may be required to verify that they are United States citizens or are otherwise legally authorized residents of the United States.

All students are required to be certified in Health Care Provider CPR or CPR for Professional Rescuer before entering the Polysomnography program.

### Contact Information

The Polysomnography program is in the Health Sciences Division. For more information, visit the Polysomnography website. For further assistance, contact the program chair at 704-330-2722, ext. 3179.

## Polysomnography (A45670)

### General Education Requirements

ENG 111	Writing and Inquiry	3.0
ENG 112	Writing and Research in the Disciplines	3.0
or ENG 114	Professional Research & Reporting	
MAT 143	Quantitative Literacy	3.0
PSY 150	General Psychology	3.0
COM 110	Introduction to Communication	3.0
or COM 231	Public Speaking	
Take 3.0 credits from the following courses:		3.0
ART 111	Art Appreciation	
ART 114	Art History Survey I	
ART 115	Art History Survey II	
HUM 120	Cultural Studies	
HUM 130	Myth in Human Culture	
MUS 110	Music Appreciation	
MUS 112	Introduction to Jazz	
PHI 215	Philosophical Issues	
PHI 240	Introduction to Ethics	
REL 110	World Religions	

### Major Requirements

PSG 110	Intro to Polysomnography	4.0
PSG 111	Neuro/Cardiopulmonary A&P	4.0
PSG 113	Polysomnography Instrumentation	3.0
PSG 210	Polysomnography I	7.0
PSG 211	Polysomnography II	7.0
PSG 112	Polysomnography Fundamentals	3.0
PSG 114	Polysomnography Clinical Education I	3.0
PSG 212	Infant/Pediatric Polysomnography	4.0
PSG 213	Case Study/Exam Review	1.0
PSG 214	PSG Clinical Applications I	1.0
PSG 215	PSG Clinical Applications II	1.0
MED 118	Medical Law and Ethics	2.0
MED 120	Survey of Medical Terminology	2.0
BIO 163	Basic Anatomy & Physiology	5.0
CIS 110	Introduction to Computers	3.0
Total Credits		68

## No diplomas are offered in Polysomnography



## Respiratory Therapy

The Respiratory Therapy curriculum prepares individuals to perform as professional respiratory therapists. In these roles, individuals complete diagnostic tests, treatments, and management of patients with heart and lung diseases.

Students learn to master many skills for treating patients with cardiopulmonary diseases. These skills include assessment, life support, monitoring, and drug administration involving patients of all ages in various settings (emergency room, critical care, or general floor). Graduates of accredited programs are eligible to take the Therapist Multiple-Choice (TMC) Examination and Clinical Simulation Examination (CSE) from the National Board for Respiratory Care. Graduates may be employed in acute and long-term hospitals, clinics, nursing homes, education, industry and home care.

For specific information about potential positions and wages in Respiratory Therapy employment, visit the Central Piedmont Career Coach website.

### Respiratory Therapy (A45720)

#### Degree Awarded

The Associate in Applied Science degree - Respiratory Therapy is awarded by the college upon completion of this program.

#### Admissions

- Complete a Central Piedmont admissions application.
- Admission to the Respiratory Therapy program is competitive. Please note that, in addition to the general application to Central Piedmont, students must complete a separate application for the Respiratory Therapy Program when they are ready to apply.
- See the Respiratory Therapy website for the program application.
- Students must be selected to enter the program. Upon acceptance and enrollment in the program, students must take all courses as scheduled and sequenced.

#### Program Accreditation

The Respiratory Therapy Program at Central Piedmont is accredited by the Commission on Accreditation for Respiratory Care (CoARC).

CoARC  
1248 Harwood Road  
Bedford, TX 76021-4244  
817.283.2835

#### Additional Expenses and Requirements

##### Expenses

In addition to tuition and textbooks, costs of this program include the following:

- uniforms, lab coat
- stethoscope, scissors, hemostats, watch with a second hand
- a physical examination, including immunizations such as tetanus toxoid, hepatitis B, TB test, blood test e.g., rubella titer,
- fees for Health Care Provider Cardiac Life Support course
- fees for Self-Assessment Examinations.

Students also are required to submit to a 13 panel drug screen every fall they are in the program at their own expense.

##### Verifications

- Students must provide a certificate of health or accident insurance.
- To participate in clinical education experiences at healthcare facilities, students may be required to submit results of a N.C. state or national criminal background check at their own expense.
- As a condition of program admission, students may be required to verify that they are United States citizens or are otherwise legally authorized residents of the United States.

##### Attendance

Attendance at professional seminars and meetings is required.

##### Grade Requirement

In order to progress in this program, students must earn a "C" or better in all curriculum courses.

#### Contact Information

The Respiratory Therapy program is in the Health and Human Services Division. For more information, call the program chair at 704.330.6081. Division offices are located on the 3rd floor of the Health Careers Building in the Belk Wing.

For an admission packet, frequently asked questions and other information, visit the Respiratory Therapy website.

##### General Education Requirements

ENG 111	Writing and Inquiry	3.0
Select 3 credits from one of the following:		3.0
ENG 112	Writing and Research in the Disciplines	
ENG 113	Literature-Based Research	
ENG 114	Professional Research & Reporting	
Select 3 credits from one of the following:		3.0
COM 110	Introduction to Communication	
COM 231	Public Speaking	
Select 3 credits from one of the following:		3.0
MAT 143	Quantitative Literacy	
MAT 152	Statistical Methods I	
MAT 171	Precalculus Algebra	
Select 3 credits from one of the following:		3.0
ECO 251	Principles of Microeconomics	
ECO 252	Principles of Macroeconomics	
HIS 111	World Civilizations I	
HIS 112	World Civilizations II	
HIS 131	American History I	
HIS 132	American History II	
POL 120	American Government	
PSY 150	General Psychology	
SOC 210	Introduction to Sociology	
Select 3 credits from one of the following:		3.0
ART 111	Art Appreciation	
ART 114	Art History Survey I	
ART 115	Art History Survey II	
HUM 120	Cultural Studies	

HUM 130	Myth in Human Culture
MUS 110	Music Appreciation
MUS 112	Introduction to Jazz
PHI 215	Philosophical Issues
PHI 240	Introduction to Ethics
REL 110	World Religions

**Major Requirements**

RCP 110	Intro to Respiratory Care	4.0
RCP 111	Therapeutics/Diagnostics	5.0
RCP 113	RCP Pharmacology	2.0
RCP 114	C-P Anatomy & Physiology	3.0
RCP 115	C-P Pathophysiology	2.0
RCP 122	Special Practice Lab	1.0
RCP 123	Special Practice Lab	1.0
RCP 145	RCP Clinical Practice II	5.0
RCP 152	RCP Clinical Practice III	2.0
RCP 210	Critical Care Concepts	4.0
RCP 211	Adv Monitoring/Procedures	4.0
RCP 214	Neonatal and Pediatric Respiratory Care	2.0
RCP 222	Special Practice Lab	1.0
RCP 223	Special Practice Lab (Special Practice Lab)	1.0
RCP 235	RCP Clinical Practice IV	5.0
RCP 247	RCP Clinical Practice V	7.0
Select 5 credits from one one of the following:		5.0
BIO 163	Basic Anatomy & Physiology	
BIO 168 & BIO 169	Anatomy and Physiology I and Anatomy and Physiology II (BIO 168 and 169 may substitute for BIO 163)	
Select 2 credits from one of the following:		2.0
MED 120 or MED 121	Survey of Medical Terminology or Medical Terminology I	
Total Credits		74

**No diplomas are offered in Respiratory Therapy.**

**No certificates are offered in Respiratory Therapy.**

## Simulation and Game Development

The Simulation and Game Development (SGD) curriculum provides a broad background in simulation and game development with practical applications in creative arts, visual arts, audio/video technology, creative writing, modeling, design, programming and management. Students receive hands-on training in design, 3D modeling, software engineering, database administration and programming for the purpose of creating simulations and games.

Graduates may qualify for employment as designers, artists, animators, programmers, database administrators, testers, quality assurance analysts, engineers and administrators in the entertainment industry, the healthcare industry, engineering, forensics, education, NASA and government agencies.

Among the tools used in the program are: 3ds Max Studio, Maya, Torque Game Engines, Game Maker, Flash, MS Silverlight, Adobe Premiere Pro, MS Visual Studio, Adobe Photoshop, ZBrush, Mudbox3D and Unreal Engine. Students use various programming languages and scripts to create their simulations and games, including: C#, XNA, C++, J2E, VB, Python, Java and Action Script.

All SGD courses meet rigorous national standards for online delivery and are offered for fully online delivery in local and international markets. The program maintains contact with local game development companies, including Red Storm, Epic Games and Virtual Heroes as well as one of the most active IGDA chapters in the nation, the Triangle Chapter. The program also offers four diplomas and one certificate.

For specific information about potential positions and wages in Simulation and Game Development employment, visit the Central Piedmont Career Coach website.

## Simulation and Game Development (A25450)

### Degree Awarded

The Associate in Applied Science degree in Simulation and Game Development is award by the college upon completion of this program.

### Admissions

- A high school diploma or equivalent is required.
- Placement tests determine placement in English (ENG) and mathematics (MAT).
- Some courses have prerequisites or co-requisites; Check the Courses section for details.

### Contact Information

The Simulation and Game Development program is in the Digital Media, Journalism and Communication Division. For more information, call the program chair at 704.330.6398 or the program office at 704.330.6549.

### General Education Requirements

ENG 111	Writing and Inquiry	3.0
Select 3 credits of the following:		3.0
ENG 112	Writing and Research in the Disciplines	
ENG 113	Literature-Based Research	
ENG 114	Professional Research & Reporting	
Select 3 credits of the following:		3.0
COM 110	Introduction to Communication	
COM 231	Public Speaking	
Select 3 credits of the following:		3.0
MAT 121	Algebra/Trigonometry I	
MAT 143	Quantitative Literacy	
MAT 152	Statistical Methods I	
MAT 171	Precalculus Algebra	
MAT 271	Calculus I	
Select 3 credits of the following:		3.0
ART 111	Art Appreciation	
ART 114	Art History Survey I	
ART 115	Art History Survey II	
HUM 120	Cultural Studies	

Programs of Study

HUM 130	Myth in Human Culture
MUS 110	Music Appreciation
MUS 112	Introduction to Jazz
PHI 215	Philosophical Issues
PHI 240	Introduction to Ethics
REL 110	World Religions
Select 3 credits of the following:	3.0
ECO 251	Principles of Microeconomics
ECO 252	Principles of Macroeconomics
HIS 111	World Civilizations I
HIS 112	World Civilizations II
HIS 131	American History I
HIS 132	American History II
POL 120	American Government
PSY 150	General Psychology
SOC 210	Introduction to Sociology

**Major Requirements**

SGD 111	Introduction to Simulation and Game Development	3.0
SGD 112	Simulation and Game Development Design	3.0
SGD 113	Simulation and Game Development Programming	3.0
SGD 114	3D Modeling	3.0
SGD 162	Simulation and Game 3-D Animation	3.0
SGD 165	Simulation and Game Character Development	3.0
SGD 168	Mobile Simulation and Game Programming I	3.0
SGD 172	Virtual Simulation and Game Environments	3.0
SGD 212	Simulation and Game Development Design II	3.0
SGD 213	Simulation Game Development Programming II	3.0
SGD 214	3D Modeling II	3.0
SGD 289	Simulation and Game Development Project	3.0
Select 2 credits of the following		2.0
SGD 288	Simulation and Game Development Portfolio Design	
WBL 111	Work-Based Learning I	
WBL 112	Work-Based Learning I	
WBL 121	Work-Based Learning II	
WBL 122	Work-Based Learning II	
WBL 131	Work-Based Learning III	

SGD 288	Simulation and Game Development Portfolio Design
WBL 111	Work-Based Learning I
WBL 112	Work-Based Learning I
WBL 121	Work-Based Learning II
WBL 122	Work-Based Learning II
WBL 131	Work-Based Learning III

**SGD Electives**

Select 12 credits of the following:		12.0
SGD 117	Art for Games	
SGD 122	Simulation and Game Database Programming	
SGD 124	Massive Multiplayer Online Programming	
SGD 125	Simulation and Game Artificial Intelligence	
SGD 126	Simulation and Game Engine Design	
SGD 135	Serious Games	
SGD 159	SGD Production Management	
SGD 161	Simulation and Game Animation	
SGD 164	Simulation and Game Audio and Video	
SGD 173	Lighting and Shading Algorithms	
SGD 174	Simulation and Game Level Design	
SGD 237	Rigging 3D Models	
SGD 193S	Selected Topics in Graphic Novel Games	

SGD 244	3D Modeling III
SGD 268	Mobile Simulation and Game Programming II
SGD 274	Simulation and Game Level Design II
SGD 285	Simulation and Game Software Engineering
SEL 293	Selected Topics in _____

Total Credits 68

**Simulation and Game Development Diploma (D25450)**

**Simulation and Game Development Diploma Specialization in Game Development (D25450-21)**

**General Education Requirements**

ENG 111	Writing and Inquiry	3.0
COM 110	Introduction to Communication	3.0

**Major Requirements**

SGD 111	Introduction to Simulation and Game Development	3.0
SGD 112	Simulation and Game Development Design	3.0
SGD 114	3D Modeling	3.0
SGD 212	Simulation and Game Development Design II	3.0
SGD 113	Simulation and Game Development Programming	3.0
SGD 213	Simulation Game Development Programming II	3.0
SGD 214	3D Modeling II	3.0
SGD 232	Survey of Game Engines	3.0
SGD 168	Mobile Simulation and Game Programming I	3.0
SGD 268	Mobile Simulation and Game Programming II	3.0

Total Credits 36

**Simulation and Game Development Diploma Specialization in Game Design (D25450-22)**

**General Education Requirements**

ENG 231	American Literature I	3.0
COM 231	Public Speaking	3.0

**Major Requirements**

SGD 111	Introduction to Simulation and Game Development	3.0
SGD 112	Simulation and Game Development Design	3.0
SGD 212	Simulation and Game Development Design II	3.0
SGD 232	Survey of Game Engines	3.0
SGD 124	Massive Multiplayer Online Programming	3.0
SGD 135	Serious Games	3.0
SGD 159	SGD Production Management	3.0
SGD 165	Simulation and Game Character Development	3.0
SGD 172	Virtual Simulation and Game Environments	3.0
SGD 174	Simulation and Game Level Design	3.0
SGD 274	Simulation and Game Level Design II	3.0

Total Credits 39

**Simulation and Game Development Diploma Specialization in Game Programming (D25450-23)**

**General Education Requirements**

COM 231	Public Speaking	3.0
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Select one of the following:	3.0
MAT 143	Quantitative Literacy
MAT 152	Statistical Methods I
MAT 171	Precalculus Algebra
MAT 172	Precalculus Trigonometry
MAT 271	Calculus I

**Major Requirements**

SGD 111	Introduction to Simulation and Game Development	3.0
SGD 113	Simulation and Game Development Programming	3.0
SGD 213	Simulation Game Development Programming II	3.0
SGD 232	Survey of Game Engines	3.0
SGD 125	Simulation and Game Artificial Intelligence	3.0
SGD 135	Serious Games	3.0
SGD 168	Mobile Simulation and Game Programming I	3.0
SGD 171	Flash Simulation and Game Programming	3.0
SGD 172	Virtual Simulation and Game Environments	3.0
SGD 268	Mobile Simulation and Game Programming II	3.0
SGD 271	Advanced Flash Programming	3.0

Total Credits	39
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**Simulation and Game Development Diploma Specialization in 3D Modeling (D25450-24)**

**General Education Requirements**

COM 231	Public Speaking	3.0
ART 111	Art Appreciation	3.0

**Major Requirements**

SGD 116	Graphic Design Tools	3.0
SGD 114	3D Modeling	3.0
SGD 214	3D Modeling II	3.0
SGD 232	Survey of Game Engines	3.0
SGD 117	Art for Games	3.0
SGD 165	Simulation and Game Character Development	3.0
SGD 172	Virtual Simulation and Game Environments	3.0
SGD 173	Lighting and Shading Algorithms	3.0
SGD 174	Simulation and Game Level Design	3.0
SGD 244	3D Modeling III	3.0
SGD 274	Simulation and Game Level Design II	3.0

Total Credits	39
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**Simulation and Game Development Diploma Specialization in Animation (D25450-25)**

**General Education Requirements**

ENG 111	Writing and Inquiry	3.0
COM 231	Public Speaking	3.0

**Major Requirements**

SGD 111	Introduction to Simulation and Game Development	3.0
SGD 114	3D Modeling	3.0
SGD 214	3D Modeling II	3.0
SGD 232	Survey of Game Engines	3.0
SGD 161	Simulation and Game Animation	3.0
SGD 162	Simulation and Game 3-D Animation	3.0
SGD 164	Simulation and Game Audio and Video	3.0

SGD 171	Flash Simulation and Game Programming	3.0
SGD 181	Machinima	3.0
SGD 210	3D Data Capture	3.0
SGD 237	Rigging 3D Models	3.0

Total Credits	39
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**Simulation and Game Development Certificates (C25450)**

- Simulation and Game Development Certificate Specialization in Simulation and Game Development Level I (C25450-21) (p. 231)
- Simulation and Game Development Certificate Specialization in Simulation and Game Development Level II (C25450-22) (p. 231)
- Simulation and Game Development Certificate Specialization in Mobile Game Development (C25450-23) (p. 231)
- Simulation and Game Development Certificate Specialization in Game Design Level 1 (C25450-24) (p. 232)
- Simulation and Game Development Certificate Specialization in Game Design Level 2 (C25450-25) (p. 232)
- Simulation and Game Development Certificate Specialization in SG Programming Level 1 (C25450-26) (p. 232)
- Simulation and Game Development Certificate Specialization in SG Programming Level 2 (C25450-27) (p. 232)
- Simulation and Game Development Certificate Specialization in Modeling/Animation Level 1 (C25450-28) (p. 232)
- Simulation and Game Development Certificate Specialization in Modeling/Animation Level 2 (C25450-29) (p. 232)

**Simulation and Game Development Certificate Specialization in Simulation and Game Development Level I (C25450-21)**

This certificate is also available to high school students enrolled in Career & College Promise.

**Major Requirements**

SGD 111	Introduction to Simulation and Game Development	3.0
SGD 112	Simulation and Game Development Design	3.0
SGD 113	Simulation and Game Development Programming	3.0
SGD 114	3D Modeling	3.0
WBL 111	Work-Based Learning I	1.0

Total Credits	13
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**Simulation and Game Development Certificate Specialization in Simulation and Game Development Level II (C25450-22)**

**Major Requirements**

SGD 232	Survey of Game Engines	3.0
SGD 212	Simulation and Game Development Design II	3.0
SGD 213	Simulation Game Development Programming II	3.0
SGD 214	3D Modeling II	3.0

Total Credits	12
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## Simulation and Game Development Certificate Specialization in Mobile Game Development (C25450-23)

### Major Requirements

SGD 113	Simulation and Game Development Programming	3.0
SGD 213	Simulation Game Development Programming II	3.0
SGD 168	Mobile Simulation and Game Programming I	3.0
SGD 268	Mobile Simulation and Game Programming II	3.0
Total Credits		12

## Simulation and Game Development Certificate Specialization in Game Design Level 1 (C25450-24)

SGD 111	Introduction to Simulation and Game Development	3.0
SGD 112	Simulation and Game Development Design	3.0
SGD 159	SGD Production Management	3.0
SGD 165	Simulation and Game Character Development	3.0
SGD 174	Simulation and Game Level Design	3.0

## Simulation and Game Development Certificate Specialization in Game Design Level 2 (C25450-25)

SGD 124	Massive Multiplayer Online Programming	3.0
SGD 135	Serious Games	3.0
SGD 172	Virtual Simulation and Game Environments	3.0
SGD 212	Simulation and Game Development Design II	3.0
SGD 274	Simulation and Game Level Design II	3.0

## Simulation and Game Development Certificate Specialization in SG Programming Level 1 (C25450-26)

SGD 111	Introduction to Simulation and Game Development	3.0
SGD 113	Simulation and Game Development Programming	3.0
SGD 168	Mobile Simulation and Game Programming I	3.0
SGD 172	Virtual Simulation and Game Environments	3.0
SGD 213	Simulation Game Development Programming II	3.0

## Simulation and Game Development Certificate Specialization in SG Programming Level 2 (C25450-27)

SGD 122	Simulation and Game Database Programming	3.0
SGD 125	Simulation and Game Artificial Intelligence	3.0
SGD 126	Simulation and Game Engine Design	3.0
SGD 268	Mobile Simulation and Game Programming II	3.0
SGD 285	Simulation and Game Software Engineering	3.0

## Simulation and Game Development Certificate Specialization in Modeling/Animation Level 1 (C25450-28)

SGD 114	3D Modeling	3.0
SGD 117	Art for Games	3.0
SGD 159	SGD Production Management	3.0

SGD 161	Simulation and Game Animation	3.0
SGD 173	Lighting and Shading Algorithms	3.0

## Simulation and Game Development Certificate Specialization in Modeling/Animation Level 2 (C25450-29)

SGD 162	Simulation and Game 3-D Animation	3.0
SGD 164	Simulation and Game Audio and Video	3.0
SGD 214	3D Modeling II	3.0
SGD 237	Rigging 3D Models	3.0
SGD 244	3D Modeling III	3.0

## Speech Language Pathology Assistant

The Speech Language Pathology Assistant (SLPA) curriculum prepares individuals to assist a licensed Speech Language Pathologist in conducting therapy in receptive and expressive language including augmentative/alternative communication and oral motor skills.

Coursework includes instruction in protocols designed to remediate individual communication problems and in assistive technology. Supervised field work experience includes working with persons of various ages with communication problems.

The Speech Language Pathology Assistant program at Central Piedmont is offered in collaboration with Caldwell Community College and Technical Institute. Required general education courses can be completed as usual at any Central Piedmont campus. SLPA program-specific courses are offered on Central Campus via live participatory classes broadcast to Central Piedmont. During fieldwork experience, students have the opportunity to utilize their knowledge and refine skills while working under the supervision of a licensed Speech Language Pathologist.

Graduates of this program may be eligible for registration with the North Carolina Board of Examiners for Speech Language Pathologists and Audiologists. Employment opportunities, under the supervision of a licensed Speech Language Pathologist, include a wide range of settings in schools, private practice and home health settings.

For specific information about potential positions and wages in Speech Language Pathology Assistant employment, visit the Central Piedmont Career Coach website.

### Degree Awarded

The Associate in Applied Science Degree-Speech Language Pathology Assistant is awarded by Caldwell Community College and Technical Institute.

### Admissions Steps

Students participating in the SLPA program must enroll in both Central Piedmont and Caldwell Community College and Technical Institute. Both schools have online applications.

1. Complete an application to Caldwell Community College and Technical Institute.
2. Complete an application to Central Piedmont.
3. Complete an application to Central Piedmont Speech-Language Pathology Assistant program.

### Program Accreditation

The Speech Language Pathology Assistant program at Caldwell Community College and Technical Institute is accredited by the North Carolina Board of Board of Examiners for Speech Language Pathologists and Audiologists.

**Contact Information**

The Speech Language Pathology Assistant program is in the Health Sciences Division at Central Piedmont. Additional information is available on the following websites:

- Central Piedmont: Speech-Language Pathology Assistant
- Caldwell Community College: Speech-Language Pathology Assistant

For further assistance, email the Central Piedmont Health Programs Admissions Specialist at healthsciences@cpcc.edu (healthsciences@cpcc.edu?subject=Question%20about%20SLPA%20Program) or call 704.330.6958.

**No diplomas are offered in Speech Language Pathology.**

**No certificates are offered in Speech Language Pathology.**

**Supply Chain Management**

The Supply Chain Management curriculum prepares individuals for a multitude of career opportunities in distribution, transportation, warehousing, supply chain, and manufacturing organizations.

Course work includes the international and domestic movement of goods from the raw materials source(s) through production, and ultimately to the consumer. Courses in economics and finance, transportation, warehousing, inventory control, material handling, purchasing, computerization, supply chain operations, federal transportation and safety regulations are emphasized.

Graduates should qualify for positions in a wide range of supply chain and logistics positions in government agencies, manufacturing, and service organizations. Employment opportunities include entry-level distribution, planning, material management, warehousing, inventory, transportation, international freight, and logistics.

For specific information about potential positions and wages in Supply Chain Management employment, visit the Central Piedmont Career Coach website.

**Supply Chain Management (A25620)**

**Degree Awarded**

The Associate in Applied Science Degree in Supply Chain Management is awarded by the college upon completion of this program

For more information, call the Business & Accounting Division office at 704.330.4228 or check the Business & Accounting Division website.

**Associate in Applied Science Degree in Supply Chain Management (A25620)**

**General Education Requirements**

ENG 111	Writing and Inquiry	3.0
ENG 112	Writing and Research in the Disciplines	3.0

COM 231	Public Speaking	3.0
MAT 143	Quantitative Literacy	3.0
or MAT 152	Statistical Methods I	
Select 3 credits from the following:		3.0
HIS 111	World Civilizations I	
HIS 112	World Civilizations II	
HIS 131	American History I	
HIS 132	American History II	
POL 120	American Government	
PSY 150	General Psychology	
SOC 210	Introduction to Sociology	
Select 3 credits from the following:		3.0
ART 111	Art Appreciation	
ART 114	Art History Survey I	
ART 115	Art History Survey II	
HUM 120	Cultural Studies	
HUM 130	Myth in Human Culture	
MUS 110	Music Appreciation	
MUS 112	Introduction to Jazz	
PHI 215	Philosophical Issues	
PHI 240	Introduction to Ethics	
REL 110	World Religions	

**Major Requirements**

BUS 115	Business Law I	3.0
LOG 110	Introduction to Logistics	3.0
CIS 110	Introduction to Computers	3.0
ACC 120	Principles of Financial Accounting	4.0
Select one of the following courses:		3.0
ECO 151	Survey of Economics	
ECO 251	Principles of Microeconomics	
ECO 252	Principles of Macroeconomics	
BUS 137	Principles of Management	3.0
MKT 120	Principles of Marketing	3.0
OMT 110	Intro to Operations Mgmt	3.0
INT 110	International Business	3.0
or INT 230	International Law	
Select 4 credits from the following:		4.0
SPA 111	Elementary Spanish I	
& SPA 181	and Spanish Lab 1	
GER 111	Elementary German I	
& GER 181	and German Lab 1	
FRE 111	Elementary French I	
& FRE 181	and French Lab 1	

**Technical Electives**

Select 4 credits from the following:		4.0
ACC 121	Principles of Managerial Accounting	
BAS 120	Introduction to Analytics	
BAS 121	Data Visualization	
BUS 139	Entrepreneurship I	
BUS 153	Human Resource Management	
BUS 240	Business Ethics	
INT 180	Travel Study Abroad	
MKT 224	International Marketing	

WBL 111	Work-Based Learning I	
WBL 112	Work-Based Learning I	
ACC 140	Payroll Accounting	
ACC 149	Introduction to Accounting Spreadsheets	
BUS 152	Human Relations	
ECM 210	Introduction to E-Commerce	
MKT 232	Social Media Marketing	
BUS 112	SIFE Business Development	
BUS 110	Introduction to Business	
TOM 260	Operations of Trucking II	
Select one of the following tracks:		15.0
Total Credits		69

**Global Logistics Track:**

LOG 125	Transportation Logistics	3.0
LOG 215	Supply Chain Management	3.0
LOG 235	Import/Export Management	3.0
LOG 240	Purchasing Logistics	3.0
LOG 250	Advanced Global Logistics	4.0
Total Credits		16

**Distribution Management Track:**

LOG 120	Global Logistics	3.0
LOG 210	Fleet Management	3.0
LOG 211	Distribution Management	3.0
LOG 220	Logistics Management	3.0
LOG 230	Transportation Management	3.0
Total Credits		15

**Trucking Operations Track:**

BUS 153	Human Resource Management	3.0
LOG 125	Transportation Logistics	3.0
TOM 130	Fleet Maintenance	3.0
TOM 250	Operations of Trucking I	3.0
LOG 210	Fleet Management	3.0
or TOM 120	Introduction to Trucking	
Total Credits		15

**No diplomas are offered in Supply Chain Management.**

**Supply Chain Management Technology Certificate (C25620)**

**Supply Chain Management Technology Certificate Specialization in Global Logistics Technology (C25620-C1)**

This certificate is designed to provide the student with a concentrated course of study in the field of global logistics. Coursework includes studies in global logistics, transportation, supply chain management and import/export management. Students are expected to demonstrate knowledge of the importance of the design of a supply chain to the competitive advantage of every industry.

Upon completion of the five required courses, a certificate is awarded by the college. This certificate may be applied toward the Associate in Applied Science degree in Supply Chain Management with a concentration in Global Logistics Technology.

For more information, call the Business & Accounting Division office at 704.330.4228 or check the Business & Accounting Division website.

**Major Requirements**

LOG 110	Introduction to Logistics	3.0
LOG 125	Transportation Logistics	3.0
LOG 215	Supply Chain Management	3.0
LOG 235	Import/Export Management	3.0
LOG 250	Advanced Global Logistics	4.0
Total Credits		16

**Surgical Technology**

The Surgical Technology curriculum prepares individuals to assist in the care of the surgical patient in the operating room and to function as a member of the surgical team. Students apply theoretical knowledge to the care of patients undergoing surgery and develop skills necessary to prepare supplies, equipment and instruments; maintain aseptic conditions; prepare patients for surgery, and assist surgeons during operations. Students of this program take the National Board of Surgical Technology and Surgical Assisting (NBST/SA) Certification Examination for Surgical Technologists before graduation. Employment opportunities include labor/delivery/emergency departments, inpatient/outpatient surgery centers, dialysis units/facilities, endoscopy suites/centers, physician's offices and central supply processing units.

For specific information about potential positions and wages in Surgical Technology employment, visit the CPCC Career Coach website.

**Surgical Technology (A45740)**

**Degree Awarded**

The Associate in Applied Science in Surgical Technology is awarded by the college upon graduation from the program.

**Admissions**

- Complete a CPCC application.
- Admission to the Surgical Technology program is competitive. Please note that, in addition to a general application to CPCC, students also must complete a separate application for the Surgical Technology program when they are ready to apply.
- See the Surgical Technology website.
- Students must be selected to enter the program. Upon acceptance and enrollment in the program, students must take all courses as scheduled and sequenced.

**Program Accreditation**

The Surgical Technology program is accredited by the Accreditation Review Council on Education in Surgical Technology and Surgical Assisting:

ARC/STSA  
6 W. Dry Creek Circle, Suite #110  
Littleton, CO 80120

Phone: 303.694.9262

## Notes

In addition to tuition and textbooks, costs of this program include the following: uniform scrubs, student ID badge, eye protection, a physical examination including a13-panel drug screening test, immunizations such as tetanus toxoid, hepatitis B, influenza vaccinations, TB test, blood tests (VDRL, rubella titer, etc.), current CPR with AED certification and a criminal background check. The student also must provide a certificate of current health and accident insurance.

In order to progress in this program, students must earn a “C” or better in all curriculum courses and be successful in clinical skills assessments.

In order to participate in clinical education experiences at health care facilities, students are required to submit results of a North Carolina state and national criminal background check and drug screen at their own expense. As a condition of this program admission, students are required to verify that they are United States citizens or are otherwise legally authorized residents of the United States.

## Contact Information

The Surgical Technology program is in the Health and Human Services Division. For information, call 704.330.3473 weekdays from 8 a.m.–5 p.m. Division offices are located on third floor in the Belk (BL) Wing of the Health Careers Building.

For an admission packet, frequently asked questions and other information, visit the Surgical Technology website.

### General Education Requirements

ENG 111	Writing and Inquiry	3.0
PSY 150	General Psychology	3.0
Select 3.0 credits from the following:		3.0
ENG 112	Writing and Research in the Disciplines	
ENG 113	Literature-Based Research	
ENG 114	Professional Research & Reporting	
Select 3.0 Credits from the following		3.0
MAT 110	Mathematical Measurement and Literacy	
MAT 143	Quantitative Literacy	
MAT 152	Statistical Methods I	
MAT 171	Precalculus Algebra	
Select 3 credits of the following:		3.0
ART 111	Art Appreciation	
ART 114	Art History Survey I	
ART 115	Art History Survey II	
HUM 120	Cultural Studies	
HUM 130	Myth in Human Culture	
MUS 110	Music Appreciation	
MUS 112	Introduction to Jazz	
PHI 215	Philosophical Issues	
PHI 240	Introduction to Ethics	
REL 110	World Religions	
Select 3 credits of the following:		3.0
COM 110	Introduction to Communication	
COM 231	Public Speaking	

### Major Requirements

SUR 110	Intro to Surgical Technology	3.0
SUR 111	Periop Patient Care	7.0
SUR 122	Surgical Procedures I	6.0
SUR 123	Sur Clinical Practice I	7.0
SUR 134	Surgical Procedures II	5.0
SUR 135	SUR Clinical Practice II	4.0
SUR 137	Professional Success Preparation	1.0
SUR 210	Advanced Sur Clinical Practice	2.0
SUR 211	Advanced Theoretical Concepts	2.0
SUR 212	Surgical Clinical Supplement	4.0
BIO 168	Anatomy and Physiology I	4.0
BIO 169	Anatomy and Physiology II	4.0
BIO 175	General Microbiology	3.0
or BIO 275	Microbiology	
MED 121	Medical Terminology I	3.0
Total Credits		73

**No diplomas are offered in Surgical Technology.**

**No certificates are offered in Surgical Technology.**

## Sustainability Technologies

The Sustainability Technologies curriculum is designed to prepare individuals for employment in solar energy installation and design, renewable energy, energy management, sustainable construction, corporate sustainability, environmental monitoring, and related industries. Major emphasis is placed on minimizing impact on the natural environment while increasing social capital, and promoting sustainable economics.

Course work includes: environmental monitoring, solar technologies, green building practices, energy auditing and management, safety, problem solving, and landscape analysis. Computer application addresses the construction, modeling and analysis of specific scenarios relating to creating a sustainable environment.

Graduates should qualify for numerous positions within the solar energy, renewable energy, green building, energy management, design, and engineering industry. Employment opportunities include, but are not limited to, the following: solar energy technicians, solar energy designers, sustainability technicians, energy auditors, environmental engineering technicians, construction management and renewable energy specialists.

For specific information about potential positions and wages in Sustainability Technologies employment, visit the Central Piedmont Career Coach website.

## Sustainability Technologies (A40370)

### Degree Awarded

The Associate in Applied Science degree – Sustainability Technologies is awarded by the college upon completion of this program.



## Admissions

- A high school diploma or equivalent is required.
- Central Piedmont placement tests are required in English and mathematics. Developmental classes in mathematics and English courses are available for students to build basic skills and knowledge.
- Counseling and orientation appointments follow placement testing.
- Students should see a faculty advisor before registration.
- Many courses have prerequisites or co-requisites; check the Courses section for details.

## Note

Students who do not take program-related courses for a one-year period must re-enter the program under requirements of the college catalog in effect at the time of re-entry.

## Contact Information

Sustainability Technologies is in the Science Division. For more information, contact the Program Chair, Matt Miller, at 704.330.6836 or visit the Sustainability Technologies page on the Science website.

### General Education Requirements

ENG 111	Writing and Inquiry	3.0
COM 110	Introduction to Communication	3.0
	or COM 231 Public Speaking	
Select 3 credits from the following courses:		3.0
ENG 112	Writing and Research in the Disciplines	
ENG 113	Literature-Based Research	
ENG 114	Professional Research & Reporting	
Select one of the following:		3.0
MAT 121	Algebra/Trigonometry I	
MAT 171	Precalculus Algebra	
MAT 271	Calculus I	
Select 3 credits from the following courses:		3.0
ECO 251	Principles of Microeconomics	
ECO 252	Principles of Macroeconomics	
HIS 111	World Civilizations I	
HIS 112	World Civilizations II	
HIS 131	American History I	
HIS 132	American History II	
POL 120	American Government	
PSY 150	General Psychology	
SOC 210	Introduction to Sociology	
Select 3 credits of the following:		3.0
ART 111	Art Appreciation	
ART 114	Art History Survey I	
ART 115	Art History Survey II	
HUM 120	Cultural Studies	
HUM 130	Myth in Human Culture	
MUS 110	Music Appreciation	
MUS 112	Introduction to Jazz	
PHI 215	Philosophical Issues	
PHI 240	Introduction to Ethics	
REL 110	World Religions	

### Major Requirements

ENV 110	Environmental Science	3.0
SST 110	Introduction to Sustainability	3.0
SST 120	Energy Use Analysis	3.0
SST 210	Issues in Sustainability	3.0
ENV 110A	Environmental Science Laboratory	1.0
ENV 226	Environmental Law	3.0
ARC 114	Architectural CAD	2.0
SST 250	Sustainability Capstone Project	3.0
ARC 225	Architectural Building Information Modeling I	2.0
PHY 110	Conceptual Physics	3.0
PHY 110A	Conceptual Physics Lab	1.0
LID 111	Low Impact Development Design Principles	3.0
	or ELC 111 Introduction to Electricity	
<b>Energy/Bldg Track</b>		
Complete one of two groups (See below)		12.0
<b>Technical Electives</b>		
Select 7 credits from the following:		7.0
SST 140	Green Building and Design Concepts	
ARC 111	Introduction to Architectural Technology	
BUS 139	Entrepreneurship I	
BUS 230	Small Business Management	
WBL 112	Work-Based Learning I	
WBL 122	Work-Based Learning II	
ENV 120	Earth Science	
GEO 131	Physical Geography I	
GEO 111	World Regional Geography	
GEL 120	Physical Geology	
GEL 230	Environmental Geology	
ALT 110	Biofuels I	
ARC 112	Construction Materials & Methods	
CIV 230	Construction Estimating	
LAR 120	Sustainable Development	
LAR 111	Introduction to Landscape Architecture Technology	
LAR 113	Residential Landscape Design	
EGR 120	Engineering and Design Graphics	
MEC 111	Machine Processes I	
MEC 161	Manufacturing Processes I	
MEC 180	Engineering Materials	
BIO 140	Environmental Biology	
BIO 140A	Environmental Biology Lab	
CHM 131	Introduction to Chemistry	
CHM 131A	Introduction to Chemistry Lab	
CHM 132	Organic and Biochemistry	
SRV 111	Surveying II	
AHR 111	HVACR Electricity	
AHR 112	Heating Technology	
AHR 113	Comfort Cooling	
ELC 112	DC/AC Electricity	
ELC 113	Residential Wiring	
ELC 118	National Electrical Code	
BPR 130	Print Reading-Construction	
CMT 214	Planning and Scheduling	

CMT 216	Costs and Productivity
ARC 111	Introduction to Architectural Technology
ARC 210	Intro to Sustain Design
ARC 230	Environmental Systems
CAR 110	Introduction to Carpentry
CAR 114	Residential Building Codes
CIV 111	Soils and Foundations
DBA 110	Database Concepts
ENV 218	Environmental Health
ENV 224	Land Resource Management
GIS 121	Georeferencing & Mapping
MEC 275	Engineering Mechanisms
PHY 131	Physics-Mechanics
PHY 132	Physics-Electricity & Magnetism
SRV 110	Surveying I
CMT 210	Construction Management Fundamentals
BPR 130	Print Reading-Construction
SRV 210	Surveying III
ELC 221	Advanced Photovoltaic System Designs
CEG 210	Construction Materials & Methods
CEG 230	Subdivision Planning & Design
CEG 212	Introduction to Environmental Technology
ELC 220	Photovoltaic System Technology
ELC 230	Wind and Hydro Power Systems
EGR 250	Statics/Strength of Mater
CEG 211	Hydrology & Erosion Control
MEC 275	Engineering Mechanisms
GIS 111	Introduction to GIS
GIS 240	Air Photo Interpretation
GIS 249	Remote Sensing
GIS 125	CAD for GIS
BIO 111	General Biology I

Total Credits 67

## Energy/Bldng Tracks

### Group 1

ALT 120	Renewable Energy Technologies	3.0
SST 130	Modeling Renewable Energy	3.0
ALT 250	Thermal Systems	3.0
ELC 220	Photovoltaic System Technology	3.0

Total Credits 12

### Group 2

CST 111	Construction I	4.0
CST 150	Building Science	3.0
CMT 120	Codes and Inspections	3.0
SST 140	Green Building and Design Concepts	3.0

Total Credits 13

## No diplomas are offered in Sustainability Technologies.

## Sustainability Technology Certificates (C40370)

- Sustainability Technologies Certificate – Specialization in Renewable Energy (C40370-C1) (p. 237)
- Sustainability Technologies Certificate – Specialization in Energy and the Environment (C40370-C5) (p. 237)

## Sustainability Technologies Certificate – Specialization in Renewable Energy (C40370-C1)

### Major Requirements

SST 110	Introduction to Sustainability	3.0
SST 120	Energy Use Analysis	3.0
SST 130	Modeling Renewable Energy	3.0
ELC 220	Photovoltaic System Technology	3.0
ALT 120	Renewable Energy Technologies	3.0

Total Credits 15

## Sustainability Technologies Certificate – Specialization in Energy and the Environment (C40370-C5)

### Major Requirements

SST 110	Introduction to Sustainability	3.0
SST 120	Energy Use Analysis	3.0
ALT 120	Renewable Energy Technologies	3.0
ENV 110	Environmental Science	3.0
ENV 110A	Environmental Science Laboratory	1.0
ENV 226	Environmental Law	3.0

Total Credits 16

## Turfgrass Management Technology

The Turfgrass Management Technology Curriculum is designed to prepare individuals for various careers in management of high end turfgrass. Classroom instruction and practical laboratory applications of turfgrass management principles and practices are included in the program of study.

Course work includes plant science, plant materials, propagation, soils, fertilizers and pest management. Turfgrass Management Technology is a program that focuses on:

- The general production and management of cultivated plants, shrubs, flowers, foliage, trees, ground covers and related plant materials
- The management of technical and business operations connected with horticultural services, and
- The basic science principles needed to understand plants and their management and care.

Also included are courses in turfgrass management, irrigation, ornamental horticulture, soil science, entomology and plant pathology, as well as courses in communications, computers and the social sciences.

Graduates should qualify for employment opportunities in landscape operations, golf courses, local, state or national parks, sports complexes,

highway vegetation and turf maintenance companies, private and public gardens. Graduates also should be prepared to take the following exams:

1. the licensed pesticide applicators exam, and
2. the ISA (International Society of Arboriculture) certified arborist exam.

For specific information about potential positions and wages in Turfgrass Management employment, visit the Central Piedmont Career Coach website.

## Turfgrass Management Technology (A15420)

### Degree Awarded

The Associate in Applied Science in Turfgrass Management Technology is awarded by the college upon completion of this program.

### Admissions

- A high school diploma or equivalent (available through Central Piedmont) is required.
- Central Piedmont placement tests are required in English and Mathematics. Developmental Studies Mathematics and English courses are available for students to build basic skills and knowledge.
- Advising and orientation appointments follow placement testing.
- Many courses have prerequisites or co-requisites; check the Courses section for details.

### Contact Information

The Turfgrass Management Technology program is in the Professional Careers Division. For more information, call the Program Chair at 704.330.4826.

#### General Education Requirements

ENG 111	Writing and Inquiry	3.0
MAT 110	Mathematical Measurement and Literacy	3.0
Select 3 credits of the following:		3.0
ENG 112	Writing and Research in the Disciplines	
ENG 113	Literature-Based Research	
ENG 114	Professional Research & Reporting	
Select 3 credits of the following:		3.0
COM 110	Introduction to Communication	
COM 231	Public Speaking	
Select 3 credits of the following:		3.0
ART 111	Art Appreciation	
ART 114	Art History Survey I	
ART 115	Art History Survey II	
HUM 120	Cultural Studies	
HUM 130	Myth in Human Culture	
MUS 110	Music Appreciation	
MUS 112	Introduction to Jazz	
PHI 215	Philosophical Issues	
PHI 240	Introduction to Ethics	
REL 110	World Religions	
Select 3 credits of the following:		3.0
ECO 251	Principles of Microeconomics	
ECO 252	Principles of Macroeconomics	

HIS 111	World Civilizations I	
HIS 112	World Civilizations II	
HIS 131	American History I	
HIS 132	American History II	
POL 120	American Government	
PSY 150	General Psychology	
SOC 210	Introduction to Sociology	

#### Major Requirements

TRF 110	Introduction Turfgrass Cultivation & Id And Identification	4.0
TRF 120	Turfgrass Irrigation and Design	4.0
TRF 152	Landscape Maintenance	3.0
HOR 166	Soils and Fertilizers	3.0
TRF 210	Turfgrass Eqmt Mgmt	3.0
TRF 230	Turfgrass Mgmt Apps	2.0
TRF 240	Turfgrass Pest Control	3.0
TRF 260	Adv Turfgrass Mgmt	4.0
TRF 220	Turfgrass Calculations	2.0
HOR 160	Plant Materials I	3.0
HOR 162	Applied Plant Science	3.0
SPA 120	Spanish for the Workplace	3.0
TRF 250	Golf /Sport Field Const	4.0
WBL 111	Work-Based Learning I	1.0
CIS 111	Basic PC Literacy	2.0

#### Technical Electives

Select 9 credits of the following:		9.0
HOR 112	Landscape Design I	
HOR 114	Landscape Construction	
HOR 116	Landscape Management I	
HOR 118	Equipment Operation and Maintenance	
HOR 161	Plant Materials II	
HOR 164	Horticultural Pest Management	
HOR 215	Landscape Irrigation	
HOR 218	Advanced Equipment Operations and Maintenance	
HOR 257	Arboriculture Practices	
HOR 265	Advanced Plant Materials	
HOR 273	Horticultural Management & Marketing	
TRF 125	Turfgrass Computer App	
TRF 130	Native Flora ID	
TRF 270	Advanced Turfgrass Equipment Management	
AGR 121	Biological Pest Management	
AGR 140	Agricultural Chemicals	
WBL 112	Work-Based Learning I	

Total Credits 71

**No diplomas are offered in Turfgrass Management Technology.**

## Turfgrass Management Technology Certificates (C15420)

### Turfgrass Management Technology Certificate with a Specialization in Turfgrass Management (C15420-C1)

This certificate is designed to prepare individuals for basic entry-level positions in the area of Turfgrass Management Technology. Coursework includes turfgrass culture and identification, equipment, irrigation, pest management and soils and fertilizers.

#### Major Requirements

HOR 166	Soils and Fertilizers	3.0
HOR 253	Horticulture Turfgrass	3.0
TRF 120	Turfgrass Irrigation and Design	4.0
TRF 210	Turfgrass Eqmt Mgmt	3.0
TRF 230	Turfgrass Mgmt Apps	2.0
TRF 240	Turfgrass Pest Control	3.0
Total Credits		18

### Turfgrass Management Technology Certificate Specialization in Turfgrass Equipment Maintenance (C15420-C2)

This certificate is designed to prepare individuals for mid entry-level positions in the area of Turfgrass Equipment Maintenance. Coursework includes turfgrass culture and identification, proper equipment operation, maintenance, and repair.

#### Major Requirements

TRF 110	Introduction Turfgrass Cultivation & Id And Identification	4.0
TRF 210	Turfgrass Eqmt Mgmt	3.0
HOR 118	Equipment Operation and Maintenance	2.0
HOR 218	Advanced Equipment Operations and Maintenance	3.0
TRF 270	Advanced Turfgrass Equipment Management	4.0
Total Credits		16

## Welding Technology

The Welding Technology curriculum provides students with a sound understanding of the science, technology and applications essential for successful employment in the welding and metal industry.

Instruction includes consumable and non-consumable electrode welding and cutting processes. Courses in math, blueprint reading, metallurgy, welding inspection and destructive and non-destructive testing provides students with industry-standard skills developed through classroom training and practical applications.

Successful graduates of the Welding Technology curriculum may be employed as entry-level technicians in welding and metal working industries. Career opportunities also exist in construction, manufacturing, fabrication, sales, quality control, supervision and welding-related self-employment.

For specific information about potential positions and wages in Welding employment, visit the Central Piedmont Career Coach website.

## Welding Technology (A50420)

### Degree Awarded

The Associate in Applied Science - Welding Technology is awarded by the college upon completion of this program.

- Welding Technology - Construction Pipe and Heavy Maintenance Welding (A50420C) (p. 239)
- Welding Technology - Entrepreneurial Welding Business & Technical Sales (A50420E) (p. 240)
- Welding Technology - Fabrication and Manufacturing (A50420F) (p. 240)

### Admissions

- Completion of a high school diploma or equivalent is required.
- Many courses have prerequisites or co-requisites. Check the Courses section for details.

### Contact Information

The Welding Technology program is in the Applied Technologies Division. For more information, call the Welding Technology Program Chair at 704.330.4429 or the Applied Technologies Division at 704.330.4445.

### Welding Technology - Construction Pipe and Heavy Maintenance Welding Track (A50420C)

#### General Education Requirements

ENG 111	Writing and Inquiry	3.0
Take 3 credits of the following:		3.0

ENG 112	Writing and Research in the Disciplines	
ENG 113	Literature-Based Research	
ENG 114	Professional Research & Reporting	

Select one of the following: 3.0

MAT 110	Mathematical Measurement and Literacy	
or MAT 143	Quantitative Literacy	

Select one of the following:

COM 110	Introduction to Communication	3.0
or COM 231	Public Speaking	

Select 3 credits of the following: 3.0

ECO 251	Principles of Microeconomics	
ECO 252	Principles of Macroeconomics	
HIS 111	World Civilizations I	
HIS 112	World Civilizations II	
HIS 131	American History I	
HIS 132	American History II	
POL 120	American Government	
PSY 150	General Psychology	
SOC 210	Introduction to Sociology	

Select 3 credits of the following: 3.0

ART 111	Art Appreciation	
ART 114	Art History Survey I	
ART 115	Art History Survey II	
HUM 120	Cultural Studies	
HUM 130	Myth in Human Culture	
MUS 110	Music Appreciation	



Programs of Study

MUS 112	Introduction to Jazz	
PHI 215	Philosophical Issues	
PHI 240	Introduction to Ethics	
REL 110	World Religions	
<b>Major Requirements</b>		
WLD 110	Cutting Processes	2.0
WLD 115	SMAW (Stick) Plate	5.0
WLD 121	GMAW (MIG) FCAW/Plate	4.0
WLD 131	GTAW (TIG) Plate	4.0
WLD 141	Symbols and Specifications	3.0
WLD 116	SMAW (stick) Plate/Pipe	4.0
WLD 143	Welding Metallurgy	2.0
WOL 110	Basic Construction Skills	3.0
WLD 151	Fabrication I	4.0
WLD 261	Certification Practices	2.0
WLD 122	GMAW (MIG) Plate/Pipe	3.0
or WLD 132	GTAW (TIG) Plate/Pipe	
WLD 215	SMAW (stick) Pipe	4.0
or WLD 270	Orbital Welding TIG/Pipe	
WLD 221	GMAW (MIG) Pipe	3.0
or WLD 231	GTAW (TIG) Pipe	
WLD 262	Inspection & Testing	3.0
or NDE 110	Intro to Nondestructive Examination	
Select 3 credits of the following:		3.0
CIS 110	Introduction to Computers	
CIS 111	Basic PC Literacy	
& WBL 111	and Work-Based Learning I	
Total Credits		67

**Welding Technology - Entrepreneurial Welding Business & Technical Sales Track (A50420E)**

<b>General Education Requirements</b>		
ENG 111	Writing and Inquiry	3.0
Take 3 credits of the following:		3.0
ENG 112	Writing and Research in the Disciplines	
ENG 113	Literature-Based Research	
ENG 114	Professional Research & Reporting	
Select one of the following:		
COM 110	Introduction to Communication	3.0
or COM 231	Public Speaking	
Select 3 credits of the following		3.0
ECO 251	Principles of Microeconomics	
ECO 252	Principles of Macroeconomics	
HIS 111	World Civilizations I	
HIS 112	World Civilizations II	
HIS 131	American History I	
HIS 132	American History II	
POL 120	American Government	
PSY 150	General Psychology	
SOC 210	Introduction to Sociology	
Select 3 credits of the following:		3.0
ART 111	Art Appreciation	

ART 114	Art History Survey I	
ART 115	Art History Survey II	
HUM 120	Cultural Studies	
HUM 130	Myth in Human Culture	
MUS 110	Music Appreciation	
MUS 112	Introduction to Jazz	
PHI 215	Philosophical Issues	
PHI 240	Introduction to Ethics	
REL 110	World Religions	
Select one of the following:		
MAT 110	Mathematical Measurement and Literacy	3.0
or MAT 143	Quantitative Literacy	
<b>Major Requirements</b>		
WLD 110	Cutting Processes	2.0
WLD 115	SMAW (Stick) Plate	5.0
WLD 121	GMAW (MIG) FCAW/Plate	4.0
WLD 131	GTAW (TIG) Plate	4.0
WLD 141	Symbols and Specifications	3.0
WLD 143	Welding Metallurgy	2.0
WLD 151	Fabrication I	4.0
WOL 110	Basic Construction Skills	3.0
ELC 111	Introduction to Electricity	3.0
WLD 262	Inspection & Testing	3.0
or NDE 110	Intro to Nondestructive Examination	
WLD 265	Automated Welding/Cutting	4.0
or WLD 270	Orbital Welding TIG/Pipe	
BUS 110	Introduction to Business	3.0
BUS 137	Principles of Management	3.0
BUS 139	Entrepreneurship I	3.0
or BUS 230	Small Business Management	
Select 3 credits of the following:		3.0
CIS 110	Introduction to Computers	
CIS 111	Basic PC Literacy	
& WBL 111	and Work-Based Learning I	
Total Credits		67

**Welding Technology - Fabrication and Manufacturing Track (A50420F)**

<b>General Education Requirements</b>		
ENG 111	Writing and Inquiry	3.0
Take 3 credits of the following:		3.0
ENG 112	Writing and Research in the Disciplines	
ENG 113	Literature-Based Research	
ENG 114	Professional Research & Reporting	
Take 3 credits of the following:		3.0
COM 110	Introduction to Communication	
COM 231	Public Speaking	
Take 3 credits of the following:		3.0
MAT 110	Mathematical Measurement and Literacy	
MAT 143	Quantitative Literacy	
Take 3 credits of the following:		3.0
ART 111	Art Appreciation	

ART 114	Art History Survey I	
ART 115	Art History Survey II	
HUM 120	Cultural Studies	
HUM 130	Myth in Human Culture	
MUS 110	Music Appreciation	
MUS 112	Introduction to Jazz	
PHI 215	Philosophical Issues	
PHI 240	Introduction to Ethics	
REL 110	World Religions	
Take 3 credits of the following:		3.0
ECO 251	Principles of Microeconomics	
ECO 252	Principles of Macroeconomics	
HIS 111	World Civilizations I	
HIS 112	World Civilizations II	
HIS 131	American History I	
HIS 132	American History II	
POL 120	American Government	
PSY 150	General Psychology	
SOC 210	Introduction to Sociology	
<b>Major Requirements</b>		
WLD 110	Cutting Processes	2.0
WLD 115	SMAW (Stick) Plate	5.0
WLD 121	GMAW (MIG) FCAW/Plate	4.0
WLD 131	GTAW (TIG) Plate	4.0
WLD 141	Symbols and Specifications	3.0
<b>Other Major Requirements</b>		
ELC 111	Introduction to Electricity	3.0
MAC 121	Introduction to CNC	2.0
WLD 132	GTAW (TIG) Plate/Pipe	3.0
WLD 143	Welding Metallurgy	2.0
WLD 151	Fabrication I	4.0
WLD 251	Fabrication II	3.0
WLD 265	Automated Welding/Cutting	4.0
WOL 110	Basic Construction Skills	3.0
WLD 262	Inspection & Testing	3.0
or NDE 110	Intro to Nondestructive Examination	
Select 4 credits from the following:		4.0
CIS 110	Introduction to Computers	
CIS 111	Basic PC Literacy	
& WBL 111	and Work-Based Learning I	
Total Credits		67

## Welding Technology Diploma (D50420)

### Diploma Awarded

A Diploma in Welding Technology is awarded by the college upon completion of this program.

### Admissions

Completion of a high school diploma or equivalent is required as the foundation of a career in this area.

## Contact Information

The Welding Technology program is in the Applied Technologies Division. For more information, call the Welding Technology program Chair at 704.330.4429 or the Applied Technologies Division at 704.330.4445.

### General Education Requirements

ENG 111	Writing and Inquiry	3.0
MAT 110	Mathematical Measurement and Literacy	3.0

### Major Requirements

WLD 110	Cutting Processes	2.0
WLD 115	SMAW (Stick) Plate	5.0
WLD 121	GMAW (MIG) FCAW/Plate	4.0
WLD 131	GTAW (TIG) Plate	4.0
WLD 141	Symbols and Specifications	3.0
WLD 116	SMAW (stick) Plate/Pipe	4.0
WLD 122	GMAW (MIG) Plate/Pipe	3.0
WLD 132	GTAW (TIG) Plate/Pipe	3.0
WLD 221	GMAW (MIG) Pipe	3.0
WLD 231	GTAW (TIG) Pipe	3.0
WLD 151	Fabrication I	4.0
CIS 111	Basic PC Literacy	2.0
or CIS 110	Introduction to Computers	
Total Credits		46

## Welding Technology Certificates (C50420)

The following certificates can be earned in the Welding Technology Program (A50420).

- Welding Technology Certificate with a Specialization in S.M.A.W. of Pipe Welding (C50420-C1) (p. 242)
- Welding Technology Certificate with a Specialization in Entry-Level Welding (C50420-C2) (p. 242)
- Welding Technology Certificate with a Specialization in Inert Gas Welding (C50420-C4) (p. 242)
- Welding Technology Certificate with a Specialization in Advanced Level Welding (C50420-C5) (p. 242)
- Welding Technology Certificate with a Specialization in Expert Level Welding (C50420-C6) (p. 242)
- Welding Technology Certificate with a Specialization in Robotic Welding and Cutting (C50420-C8) (p. 242)
- Welding Technology Certificate with a Specialization in Orbital GTAW Welding (C50420-C9) (p. 242)
- Welding Technology Certificate Specialization in G.M.A.W. of Pipe Welding (C50420-10) (p. 242)
- Welding Technology Certificate Specialization in S.M.A.W. Structure Steel Welding (C50420-11) (p. 242)
- Welding Technology Certificate Specialization in Steel Fabrication (C50420-12) (p. 242)
- Welding Technology Certificate Specialization in Advanced Welding Automation for Manufacturing (C50420-13) (p. 243)

### Admissions

Completion of a high school diploma or equivalent is encouraged as the foundation of a career in this area.

## Contact Information

For more information, call the Welding Technology Program Chair at 704.330.4429 or the Applied Technologies Division at 704.330.4445.

### Welding Technology Certificate with a Specialization in S.M.A.W. of Pipe Welding (C50420-C1)

#### Major Requirements

WLD 110	Cutting Processes	2.0
WLD 115	SMAW (Stick) Plate	5.0
WLD 141	Symbols and Specifications	3.0
WLD 116	SMAW (stick) Plate/Pipe	4.0
WLD 215	SMAW (stick) Pipe	4.0
Total Credits		18

### Welding Technology Certificate with a Specialization in Entry-Level Welding (C50420-C2)

#### Major Requirements

WLD 110	Cutting Processes	2.0
WLD 115	SMAW (Stick) Plate	5.0
WLD 121	GMAW (MIG) FCAW/Plate	4.0
WLD 131	GTAW (TIG) Plate	4.0
WLD 141	Symbols and Specifications	3.0
Total Credits		18

### Welding Technology Certificate with a Specialization in Inert Gas Welding (C50420-C4)

#### Major Requirements

WLD 110	Cutting Processes	2.0
WLD 121	GMAW (MIG) FCAW/Plate	4.0
WLD 131	GTAW (TIG) Plate	4.0
WLD 141	Symbols and Specifications	3.0
Total Credits		13

### Welding Technology Certificate with a Specialization in Advanced Level Welding (C50420-C5)

#### Major Requirements

WLD 116	SMAW (stick) Plate/Pipe	4.0
WLD 122	GMAW (MIG) Plate/Pipe	3.0
WLD 132	GTAW (TIG) Plate/Pipe	3.0
WLD 261	Certification Practices	2.0
Total Credits		12

### Welding Technology Certificate with a Specialization in Expert Level Welding (C50420-C6)

#### Major Requirements

WLD 231	GTAW (TIG) Pipe	3.0
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WLD 215	SMAW (stick) Pipe	4.0
WLD 221	GMAW (MIG) Pipe	3.0
WLD 262	Inspection & Testing	3.0
Total Credits		13

### Welding Technology Certificate with a Specialization in Robotic Welding and Cutting (C50420-C8)

#### Major Requirements

WLD 141	Symbols and Specifications	3.0
WLD 121	GMAW (MIG) FCAW/Plate	4.0
WLD 110	Cutting Processes	2.0
ELC 111	Introduction to Electricity	3.0
WLD 265	Automated Welding/Cutting	4.0
Total Credits		16

### Welding Technology Certificate with a Specialization in Orbital GTAW Welding (C50420-C9)

#### Major Requirements

WLD 141	Symbols and Specifications	3.0
WLD 110	Cutting Processes	2.0
WLD 131	GTAW (TIG) Plate	4.0
ELC 111	Introduction to Electricity	3.0
WLD 270	Orbital Welding TIG/Pipe	4.0
Total Credits		16

### Welding Technology Certificate Specialization in G.M.A.W. of Pipe Welding (C50420-10)

#### Major Requirements

WLD 110	Cutting Processes	2.0
WLD 121	GMAW (MIG) FCAW/Plate	4.0
WLD 141	Symbols and Specifications	3.0
WLD 122	GMAW (MIG) Plate/Pipe	3.0
WLD 221	GMAW (MIG) Pipe	3.0
Total Credits		15

### Welding Technology Certificate Specialization in S.M.A.W. Structure Steel Welding (C50420-11)

#### Major Requirements

WLD 110	Cutting Processes	2.0
WLD 115	SMAW (Stick) Plate	5.0
WLD 121	GMAW (MIG) FCAW/Plate	4.0
WLD 141	Symbols and Specifications	3.0
Total Credits		14

### Welding Technology Certificate Specialization in Steel Fabrication (C50420-12)

#### Major Requirements

WLD 110	Cutting Processes	2.0
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WLD 115	SMAW (Stick) Plate	5.0
WLD 121	GMAW (MIG) FCAW/Plate	4.0
WLD 122	GMAW (MIG) Plate/Pipe	3.0
WLD 141	Symbols and Specifications	3.0
Total Credits		17

### Welding Technology Certificate Specialization in Advanced Welding Automation for Manufacturing (C50420-13)

This program is also available to high school students through Career and College Promise.

#### Major Requirements

WLD 110	Cutting Processes	2.0
WLD 121	GMAW (MIG) FCAW/Plate	4.0
WLD 131	GTAW (TIG) Plate	4.0
WLD 141	Symbols and Specifications	3.0
WLD 265	Automated Welding/Cutting	4.0
Total Credits		17

## Corporate and Continuing Education

Whether the goal is to gain new job skills, prepare for changing careers, earn credentials or launch a small business, Corporate and Continuing Education can help make it happen. Individuals and employers meet ongoing learning and workforce development needs through courses and short-term programs on campuses, in the community, at workplaces and online. Continuing education courses are non-credit, meaning they do not lead to a degree or college academic credit. Many courses, however, earn skill and knowledge-based certificates and certifications through industry-based content for professional and trade careers. In-person courses are offered on flexible schedules, including nights and weekends.

For detailed information, visit the Corporate and Continuing Education website.

**Individuals** may choose from hundreds of courses and programs - from beginner to more advanced - to acquire the job skills and knowledge to meet career goals or to start or grow a small business. Industry-specific and professional certifications or exam prep validate job skills to launch or advance a career. Many programs also offer continuing education units (CEU) to keep work credentials up to date. Individuals also may choose personal enrichment courses to pursue a hobby or interest, including art, fitness, cooking and more.

**Employers** need a ready, talented and knowledgeable workforce to stay competitive. Corporate and Continuing Education responds with flexible, focused programming that covers all aspects of business – from office and team skills to leadership and project management. Fee-based public classes are offered for employees, as well as custom engagements, to meet unique learning needs.

For custom engagements, professionals in the Corporate Learning Center help companies assess organizational and training needs and design courses to meet their objectives. Custom design and delivery means training can fit any work cycle, may be held onsite and may be designed to effectively target employees' skill levels. For recognized industry standards in management and processes, such as project management, computer

training or engineering and manufacturing, the Corporate Learning Center provides a one-stop resource that leverages the strengths of the entire college.

## Course Search and Registration

Central Piedmont's Program Finder or online Schedule Builder permits searches by topic to explore course descriptions, along with days, times and locations of current courses and programs. Courses may be added during the term to fit student needs.

Registration is ongoing throughout each semester with registration dates and new classes typically announced in late April, early July and late November. Most continuing education courses and programs are open enrollment and do not require prerequisites, applications or transcripts. Register for classes from the Corporate and Continuing Education website or contact customer service for any assistance you need by calling 704.330.4223.

## Job and Career Training

Job and career training is aligned with the learning demands of individuals and the employers who hire them. As the college remains up to date, the courses can, and often do, change in content and format to better serve students and clients. Continuing education courses cover many topics and skills from beginner to advanced levels, including preparation for industry credentials. Accessible with year-round scheduling, these are offered to the public at all campus locations as well as multiple community locations and centers. To find specific site locations, use the Campus Finder.

For details, visit the Corporate and Continuing Education website or contact customer service at 704.330.4223.

Companies and organizations may inquire about custom or group training needs by contacting the Corporate Learning Center at 704.330.4660.

## Exam Prep, Licensing, Professional Certifications (p. 244)

### Courses and Programs

For information on the latest public offerings in non-credit continuing education, contact customer service at 704.330.4223 or enter keywords or topics in the online Schedule Builder on the Corporate and Continuing Education website.

Areas of study include the following:

- Audio Engineering (p. 245)
- Business Processes (p. 245)
- Career Development (p. 94)
- Computer and Information Technology (p. 246)
- Construction (p. 246)
- Cosmetology (p. 247)
- Entrepreneurship and Small Business (p. 247)
- Financial Services (p. 247)
- General Business (p. 247)
- Graphic Design, Printing and Digital Photography (p. 248)
- Healthcare (p. 248)
- Hospitality and Food Services (p. 248)
- Human Resources and Payroll (p. 248)
- Insurance (p. 249)
- Languages and Culture (p. 249)
- Leadership and Management (p. 249)



Marketing and Social Media (p. 250)  
Notary Public (p. 250)  
Public Safety (p. 250)  
Real Estate and Appraisal (p. 251)  
Transportation, Distribution and Logistics (p. 251)  
Teacher Education (p. 251)  
Welding and Inspection (p. 252)

## Exam Prep, Licensures, Professional Certifications

Continuing education at Central Piedmont helps students achieve professional goals of knowledge, skill or ability through non-degree career-based programs in industry-specific competencies or requirements and nationally recognized exam preparation. Choose from an expanded number of industry-specific programs to assist in entering a career field, getting ahead and validating job skills. Short-term and more advanced programs, including those available online, offer professional development to earn Continuing Education Units (CEUs) or to keep credentials up to date.

The Corporate and Continuing Education website lists some of the college's offerings for certificates, certifications, exams and exam prep or professional licensing.

Course offerings change in response to relevant learning needs. Courses and programs are added and revised regularly to match current and future workforce development and employer demands in the Charlotte region. Areas of study include the categories above.

For help finding particular courses or programs of interest, contact Customer Service at 704.330.4223.

## Exam Preparation

### Business and Finance

- Payroll Professional
- Human Resources: SHRM/CP-SHRM-SCP Preparation
- Internal Auditor Exam Prep
- QuickBooks Certified User Exam Prep
- ServSafe Training and Exam Prep

### Construction and Manufacturing

- American Welding Society (AWS) - Certifications and Exam Prep
- Certified Supply Chain Professional Exam Prep (APICS/CSCP)
- Commercial Contractor Exam Review
- Residential Contractors Exam Review

## Licensures

The lists below are non-inclusive and programming is subject to change, based on industry demand and individual career planning. Check for additional courses and those available by request by contacting Customer Service at 704.330.4223.

Contact the Corporate Learning Center at 704.330.4660 for custom group training certifications, including FINRA Series 6 and 63 Licensure Prep and FINRA Series 7 Review.

### Automotive and Transport

- N.C. Commercial Drivers License:
- Learning to Drive a Commercial Truck Class "A" (CDLA)
- N.C. Independent Auto Dealer - Initial License
- N.C. Independent Auto Dealer - License Renewal

### Insurance

- N.C. Accident, Sickness and Health Agent Licensure Prep
- N.C. Casualty Insurance Agent Licensure Prep
- N.C. Life Insurance Agent Licensure Prep
- N.C. Property Insurance Agent Licensure Prep

### Residential

- Mortgage Loan Originator Licensure Prep Courses
- N.C. Real Estate Broker Licensure Prep

## Professional Certifications

Lists below are non-inclusive and programming is subject to change, based on industry demand and individual career planning. Check for additional courses and those available online or per request by contacting Customer Service at 704.330.4223. For custom group certification training, contact the Corporate Learning Center at 704.330.4660.

\*College credit curriculum programs offer certifications in areas marked with an asterisk. For information about curriculum programs, contact the Information Center at 704.330.2722 or use the Central Piedmont Program Finder.

### Business Management and Operations

Business Analysis Plus Certificate  
Data Analytics with Excel Certificate  
> Data Analysis and Business Modeling with Excel  
> Excel Advanced  
> Excel Basic  
> Excel Intermediate  
Human Resources: SHRMO-SHRM-CP Preparation  
Lean Enterprise Specialist Certification  
Notary - Electronic Notary  
Payroll Professional (CPP) Exam Prep; Fundamental Payroll Certification-FPC  
Project Management  
> Project Management (Applied) with PMI PMP/CAPM  
> Project Management, Concentration in Agile - Agile Certified Practitioner Exam Prep (PMI-ACP)  
> Project Management, Concentration in Business Analysis  
QuickBooks™ Certified User: Exam Review and Certification Exam  
Six Sigma:  
> Lean Six Sigma Black Belt Certification  
> Lean Six Sigma Green Belt Certification  
Career Readiness Certificate (CRC)

### Computer and Information Systems

AutoCAD Certificate  
Core Java Programming Certificate  
Microsoft Server 2012 R2 Certificate  
Power BI Certificate  
Web Development Fundamentals with JavaScript/Node.JS/Mongo Certificate  
Web Marketing and Design Certificate

Digital Photographer Certificate

### Finance and Insurance

Mortgage Lending Specialist  
Professional Bookkeeper

### \*Engineering Technologies Certification

\*Civil Engineering Technology Certificates (p. 140)  
\*Electrical Engineering Technology Certificates (p. 166)  
\*Mechanical Engineering Technology Certificates (p. 203)  
\*Mechatronics Engineering Technology Certificates (p. 205)

### Healthcare

Assisted Living Activity Director - 50 Hour Training  
Advanced Coding  
Healthcare Activity Director

### Manufacturing and Production

AWS Welding Certification and Exam Prep  
Forklift Certification Training  
Production Management (PMP® and CAPM®)  
\*Supply Chain Management - Production and Inventory Management (APICS/CPIM)

Natural Hair Care Certification

### N.C. State Auto Inspections

Vehicle Emissions Inspection OBD II, Initial Certification  
Vehicle Emissions Inspection OBD II, Re-certification  
Vehicle Safety Inspection, Initial Certification  
Vehicle Safety Inspection, Re-certification

Substitute Teacher Certificate

## Audio Engineering

Learn about the recording studio from an artistic and operational view in a progressive series of non-degree continuing education courses. For details, visit the Audio Engineering website.

### Courses

Audio Engineering Level 1 (AAC 8002)  
Introduction to the recording studio, including audio consoles, equipment and echo chambers.

Audio Engineering Level 1B (AAC 8102)  
Continue study from Level 1 and prepare for Level 2.

Audio Engineering Level 2 (AAC 8003)  
Begin to apply recording techniques, including multi-track recording.

Audio Engineering Level 3 Techniques (AAC 8005)  
Learn digital workstations and ProTools for multi-track recording with post-production, editing and more.

Register or check for additional courses by contacting customer service at 704.330.4223. For custom or group training, contact the Corporate Learning Center at 704.330.4660.

## Business Processes

For more details, visit the Business and Entrepreneurship Web page of Corporate and Continuing Education website.

## Business Analysis

### Professional in Business Analysis Plus Certificate Program

The Business Analysis Plus Certificate is a comprehensive program for anyone who determines project needs or who needs to define, communicate, recommend and manage the scope of a business solution. Participants get extensive training following the PMBOK® (Project Management Body of Knowledge) standards and PMI-PBA® Examination Content Outline. It provides the necessary educational requirements to apply for and to prepare participants to take the PMI-PBA® exam offered by PMI®, the Project Management Institute.

## Lean Manufacturing

### Lean Manufacturing

Experience first-hand the power of Lean Manufacturing in this fun, eight-hour course and factory simulation. Learn, then apply principles and practices immediately in an organization to reduce waste and remove non-value added activities. This course is especially relevant to front-line leaders, hourly production employees and work teams.

## Project Management

### Project Management Plus Certificate Program (PMI® Compliant)

This comprehensive program is for individuals who lead or direct projects and programs, either fully or in part. The extensive training follows the PMBOK® (Project Management Body of Knowledge) standards that include Project Planning and Control, Determining Business Requirements, Stakeholder Management plus powerful hands-on management applications of Microsoft Project using real-world scenarios. The program of five courses also prepares participants to take PMP® (Project Management Professional) and CAPM® (Certified Associate in Project Management) exams - designations awarded by PMI®, the Project Management Institute.

## Lean Six Sigma Certification

Lean Six Sigma, the powerful methodology that has revolutionized leading corporations worldwide, is available at Central Piedmont as a blended course with classroom instruction and online assignments. The benefits of implementing Lean Six Sigma are lowered costs, improved profitability, increased market share and more.

### Lean Six Sigma Green Belt Certification

This course blends classroom instruction with online assignments and exams. There are 24 hours of required instructor-led classroom sessions every other week during the session and approximately 22 hours of online activities. Online hours may vary, per student based on knowledge and skill. There are no prerequisites to this course. Participants who successfully complete the program will receive a Central Piedmont certificate and be awarded 4.6 Continuing Education Units (CEUs).

### Lean Six Sigma Black Belt Certification

After successful completion of this 100-hour course, participants are better prepared to provide an organization with the leadership and knowledge expertise of a certified Six Sigma Black Belt. The course content is built on the American Society for Quality (ASQ) body of knowledge. Six Sigma Black Belts lead cross-functional project teams to carry out identified improvement projects. As such, Black Belts need to be able to implement all of the appropriate tools of Six Sigma and provide statistical expertise for project teams. They work with, lead and mentor cross-functional teams

to define and measure problems, analyze the root causes, implement improvements and establish control at new levels. This course blends classroom instruction with required online assignments.

Additional non-degree certificates, certifications and licensure or test preparation programming is available. Find more information by calling customer service at 704.330.4223.

## Computer Technology Institute

The Computer Technology Institute at Central Piedmont offers continuing education courses designed with the applied knowledge and skills to help advance participants' careers through the use of technology. Led by industry experienced experts, the content focuses on aligning high demand IT skills with individual and professional career goals.

### Topics include:

AutoCAD  
Basic Computer Skills  
Data Management and Analytics  
IT Career Management  
IT Infrastructure Support  
Programming and Web Development

For details about programs, courses and career management, visit the Information Technology Web page of the Corporate and Continuing Education website.

For employers, the Corporate Learning Center offers group training or assists in sponsoring staff in publicly offered sessions. Learn more by calling 704.330.4660.

## Construction

From construction and sustainability professionals to average homeowners looking for ways to improve their homes, Central Piedmont offers continuing education to meet individual goals. Explore the topics below, and find additional courses by contacting customer service at 704.330.4223 or by visiting the continuing education Construction Web page.

For custom group training certifications, contact the Corporate Learning Center at 704.330.4660.

Topics and courses include the following:

### Brick Masonry

Introduction to Bricklaying (MAS 7001)

### Building Codes

Central Piedmont offers annual training to provide up-to-date information for code officials, general contractors and anyone working in the building industry. These approved courses meet the six hours required by N.C. Qualification Board Mandatory Continuing Education Credits for Code Officials:

- N.C. Residential Building Code
- N.C. Plumbing Code
- N.C. Mechanical Code
- N.C. Mechanical/Fuel Gas Code

Courses offer construction supervisors and others currently working in the industry a comprehensive review of those sections of the N.C. Residential Building Code applicable in Mecklenburg County. Classes include a review of applicable state and local code interpretations and Mecklenburg County's code inspection procedures. A county code enforcement official observes each class and conducts an inspection field trip where students observe an actual code inspection and have an opportunity to ask questions and to discuss concerns.

### Building Contractor

Home Construction Methods and Details (CAR 7101)  
Residential Blueprint Reading and Estimating (BPR 7002)

### Exam Review

Commercial Contractor's Exam Review (CAR 7131)  
Residential Contractor's Exam Review (CAR 7130)

## NCCER Core Curriculum (National Center for Construction Education and Research)

NCCER - Core (CIX 7017)

### Carpentry

Central Piedmont offers levels of instruction in carpentry beginning with basic construction knowledge and advancing into more specialized skill areas and competencies. Each course leads to certification of competency for construction apprentices, current craft workers and others. Written and practical testing is required for area certification in each level.

Introduction to Carpentry (CIX 7000)  
Carpentry II (CIX 7006)  
Carpentry III (CIX 7007)

### Electrical

Electrical Contractors Exam Review (ELX 7056)  
This course reviews the National Electrical Code and Calculations for those who are preparing to take the examination to be licensed as an electrical contractor in North Carolina.

Electrical Wiring (CTP 9103)  
Industrial Electrical Wiring I (ISE 7141)  
Introduction to Electrical Control Wiring (ISE 7142)  
Introduction to Electrical Utility Industry (EUS 110)  
National Electrical Code (ELC 118)

### Plumbing

Plumbing 1-2-3  
Backflow Assembly Tester Certification (PLU 7015)  
Backflow Prevention Assembly and Tester Re-certification (PLU 7016)

### Code Qualification

Code Qualification Precepts (COD 7200)

### Law and Administration

Law and Administration (COD 7100)

### Building Level Standard Inspection

Building Level I (COD 7101)  
Building Level II (COD 7102)  
Building Level III (COD 7103)

### Electrical Level Standard Inspection

Electrical Level I (COD 7104)  
 Electrical Level II (COD 7105)  
 Electrical Level III (COD 7106)

### Mechanical Level Standard Inspection

Mechanical Level I (COD 7107)  
 Mechanical Level II (COD 7108)  
 Mechanical Level III (COD 7109)

### Plumbing Level Standard Inspection

Plumbing Level I (COD 7110)  
 Plumbing Level II (COD 7111)  
 Plumbing Level III (COD 7112)

### Home Improvement / Do It Yourself (DIY)

Central Piedmont offers short courses and project-related workshops to help participants improve their homes. As continuing education or non-degree programs, these are designed for beginners. Typically held on one Saturday, these short classes are designed for homeowners who want to be more knowledgeable and then be able to test their skills on their own home improvements and projects. Participants get hands-on assistance, guidance on tools, professional tips, and more.

#### Courses include:

Build an Adirondack Chair (CIX 7024)  
 Introduction to Furniture/Cabinet Making (CAB 8300)  
 Introduction to Hand and Power Tools (CIX 7023)  
 Introduction to Interior Trim Molding (TRM 8000)

### Home Inspection Licensing

Professional Home Inspector Training (CIX 71013)  
 The House as a System (CIX 7014)

## Cosmetology

#### Natural Hair Care Certification

A two-part series prepares students for success on the Natural Hair Care Braiding License Exam.

#### Natural Hair Care Certification Part 1

Beginner level covers general sciences and practices specific to infection control, sanitation, bacteriology, first-aid, shampooing, draping, anatomy, disorders of the hair and client consultation.

#### Natural Hair Care Certification Part 2

This course covers advanced level applications specific to styles and techniques of natural hair styling including twisting, wrapping, extending, locking, blow dry and hot iron; and business management and professional ethics and other related topics.

For complete details about certification, visit the Corporate and Continuing Education website for Cosmetology.

## Entrepreneurship and Small Business

Central Piedmont offers entrepreneurs and small businesses non-credit courses, certification, exam prep, and services. Course topics include business planning, accounting, office productivity, marketing, financing, computer technology, business analysis, project management, and human

resources. Find more information and offerings on the Business and Entrepreneurship Web page.

In addition to programming, the Small Business Center at Central Piedmont has free resources, including events, seminars, and one-on-one counseling. Current activities and courses include popular topics, such as QuickBooks, starting a food truck, and bidding on government contracts. Find a schedule and more details on the Small Business Center website. Visit the Small Business Center on the second floor of the Hall Professional Development Building on Central Campus or contact by email at [mary.brown@cpcc.edu](mailto:mary.brown@cpcc.edu).

Find classes and course information by using Program Finder or the online Schedule Builder tool. Register by calling customer service at 704.330.4223 or register online. Group or custom business training is available by calling the Corporate Learning Center at 704.330.4660 or the Small Business Center at 704.330.6736.

## Financial Services

#### The James R. Worrell, Sr. Financial Services Institute

Banking and finance courses and programs are offered through the James R. Worrell, Sr. Financial Services Institute located at the Harris Campus. Non-credit or continuing education courses cover requirements for pre-licensing, continuing education and professional development for a highly regulated industry. From the entry-level banking services representative course to more advanced analytical courses, individuals may enroll to begin a career, to change into a new career, or to build professional skills and credentials to get ahead.

Non-credit Financial Services programs and courses include:

Accounting and QuickBooks®  
 Banking and Mortgage Lending  
 CFP® Certification Education  
 Insurance  
 Notary Public  
 Real Estate  
 Property Management and Appraisal  
 Financial Management

#### Scholarships

Scholarship opportunities are available for careers in financial services. Download a PDF of the scholarship application. (This Google application form is best viewed in Google Chrome or Mozilla Firefox.)

## General Business

Learn about general business concepts and management, including non-profits.

#### Popular course topics include:

Completing the Application for 501(c)(3) Tax Exempt Status  
 From Grant Seeking to Grant Writing  
 Mastering Negotiations  
 Non-profit Fundraising  
 Non-profit Management  
 Starting a Non-profit

Search for courses by topic(s) using a keyword or words with Schedule Builder on the Corporate and Continuing Education website.



For additional information on business topics, including services and no-cost counseling, visit the Central Piedmont Small Business Center website.

For more information or to register for non-credit continuing education courses, call customer service at 704.330.4223.

## Graphic Design, Printing and Digital Photography

For complete listings and course details, visit the Graphic Design, Printing and Digital Photography Web page of the Corporate and Continuing Education website.

New or updated courses may be added, along with online courses which may be made available by request. For the latest offerings, check with customer service at 704.330.4223, or search by topic through Schedule Builder from the Corporate and Continuing Education website.

### Courses include:

#### Adobe Creative Suite

Beginner Adobe InDesign (PRX 7073)  
Intermediate Adobe InDesign (PRX 7074)  
Beginner Adobe Illustrator (PRX 7063)  
Intermediate Adobe Illustrator (PRX 7064)  
Beginner Photoshop (PRX 7053)  
Intermediate Photoshop (PRX 7054)

#### Photography

Digital Photographer Certificate (MMG 7942)  
Lightroom Classic CC (MMG 7937)  
Understanding the Digital SLR Camera (MMG 7948)

#### Printing

T-Shirt Design and Printing (PRX 7032)

## Healthcare

For details about course offerings, visit the Healthcare Web page of the Continuing Education website.

### Topics Include:

#### Assisted Living

Activity Directory Part I (OAP 7009)  
Activity Director Part II (OAP 7016)  
Assisted Living Activity Director 50-Hour Training (OAP 7009)  
Assisted Living Administrator in Training (GEX 7016)  
Bridge the Gap (OAP 7011)  
Healthcare Activity Director (OAP 7010)

#### Medical Billing and Coding

Advanced Coding (HEA 7313)  
Exploring Medical Language (HEA 7254)  
Medical Keyboarding (HEA 7625)  
Medical Reimbursement Specialist (HEA 7270)

#### Medical Professional Certifications

EKG Technician (HEA 7315)  
Phlebotomy Training Experience (MLA 7001)

## Hospitality and Food Services

For complete details about course offerings in Hospitality and Food Services, contact customer service at 704.330.4223.

### Courses and Topics include:

Become a Professional Personal Chef  
Cake Decorating and Design Certificate  
Catering Management  
Certificate in Floral Design  
Culinary Apprentice Certificate  
Food Systems Management  
Housekeeping Certificate  
Medical Nutrition Therapy  
Nutrition & Foodservice Professional Certificate (Certified Dietary Manager-CDM, CFPP)  
ServSafe®  
ServSafe Manager

Programs may be available for exclusive or group training by calling 704.330.4660.

## Human Resources and Payroll

For the latest programming and more detail, explore Human Resources on the Corporate and Continuing Education website or contact customer service at 704.330.4223.

For custom group training certifications, contact the Corporate Learning Center at 704.330.4660.

### Human Resources Certificate Program

Master the fundamentals in human resources management, then study the finer points of employment law, recruitment, employee relations and benefits with the Human Resources Certificate Program.

This comprehensive program consists of five courses:

Fundamental of Human Resources Management (BUX 8006)  
Basic Employment Law for Human Resources (BUX 8007)  
Human Resources Benefits Administration (BUX 8011)  
Human Resources Employee Relations (BUX 8012)  
SHRM-CP and SHRM-SCP Preparation (BUX 7930)

Central Piedmont is a partner with the Society of Human Resource Management (SHRM) to offer preparation review courses designed for individuals who want to earn SHRM-CP or SHRM-SCP credentials.

### Payroll Preparation Review Courses for Fundamental Payroll Certification (FPC) and Certified Payroll Professional (CPP)

In partnership with the American Payroll Association, the college offers review courses designed for payroll professionals who want to study for the Fundamental Payroll Certification (FPC) or Certified Payroll Professional (CPP) exam:

PayTrain Level 1 (PPS 7004)

A 30-hour course providing basic knowledge and skills for successful entry into the payroll industry

PayTrain Level 2 (PPS 7005)

A 36-hour course providing a solid understanding of advanced payroll topics necessary for payroll managers and supervisors and is ideal for experienced payroll professionals preparing for the Certified Payroll Professional (CPP) exam.

## Insurance

Jobs in the insurance industry involve helping individuals and businesses manage risk to protect themselves from catastrophic losses and to anticipate potential risk problems. The job outlook is strong, with annual employment growth forecast at 1.7 percent for the Charlotte region. There are more than 4,000 insurance sales agents working in the area, earning an average of \$77,500 a year (2018).

The N.C. Department of Insurance regulates licensing. Non-degree or continuing education courses satisfy state requirements for obtaining a license in the following areas:

- NC Property Insurance Agent (INX 7501)
- NC Casualty Insurance Agent (INX 7502)
- NC Life Insurance Agent (INX 7503)
- NC Accident, Sickness and Health Agent (INX 7504)

For complete details about these courses, visit the Financial Services Web page.

## Languages and Culture

Connect and learn to better communicate with individuals from near and far with non-degree continuing education courses. Beginner to intermediate classes feature conversational practice and encourage participants to use their new language skills in real-world situations. Courses are taught at several locations in Mecklenburg County, including community locations. Group classes for travel clubs or businesses also are available by contacting the Corporate Learning Center at 704.330.4660.

Continuing education language courses emphasize grammar, speaking and listening skills. Beginning courses are offered in three levels:

- Level 1** assumes no prior knowledge of the language,
  - Level 2** requires basic skill communication in short sentences or phrases, and
  - Level 3** requires basic conversational skills.
- Intermediate courses are designed to be taught in the target language as much as possible with little or no conversation in English.

Available courses include:

### Fench

Beginning French I (LAN 7301)

### German

Beginning German I (LAN 7305)

### Italian

Beginning Italian I (LAN 7315)

Beginning Italian II (LAN 7316)

### Spanish

Beginning Spanish I (LAN 7309)

Beginning Spanish II (LAN 7310)

Beginning Spanish III (LAN 7311)

Intermediate Spanish (LAN 7030)

## International Learning

Test of English as a Foreign Language® (TOEFL) Preparation I (EFL 8050)

Test of English as a Foreign Language® (TOEFL) Preparation II (EFL 8051)

For more details about courses offerings, visit the Languages and Culture Web page. To register for classes, contact customer service at 704.330.4223.

## Languages for Business and Industry

Central Piedmont offers customized language training for businesses and various professions tailored to the business communication need. For information, call the Corporate Learning Center at 704.330.4660.

### ESL Instructor Fast-Track Training

ESL Instructor Fast-Track Training takes approximately six weeks and is designed for prospective or new English as a Second Language (ESL) instructors in adult basic education, community-based or mission programs. It is a 30-hour, instructor-facilitated online course on the theory and practice of English language teaching and learning for adults. Participants will be able to obtain a certificate of completion and three CEUs in a flexible online format that does not require set meeting times or traveling costs.

### Study Abroad

Gain a global perspective through travel and learning in selected programs open to community members. Such programs include: studying language in Peru, Germany and Montreal, getting a taste of the cuisine and art in France, Greece and England, and exploring the emerging economies of Brazil and China.

Learn more about participating in these learning adventures by calling 704.330.6167 or visit the Global Learning Web page for complete details.

## Leadership and Management

Typical courses and current topics are listed below, however new or updated content may not be reflected. Check with continuing education customer service by calling 704.330.4223 for the latest information on public courses. Visit the Leadership and Management Web page of the Corporate Learning Center for more detail on workforce leadership development or call 704.330.4660.

### Communication

- Business Writing
- High Impact Feedback and Listening
- Presentation Success

### Financial Performance

- Accounting for Non-Financial Managers
- Zodiak® Business Simulation

### Leadership

Learn the components of a successful team and the stages of its development. Master the skills needed to effectively manage projects, make decisions and solve problems in a team setting. In this course, learners have a chance to learn the pitfalls of unhealthy group interaction and minimize any of its effects on their team. Courses include:

Building an Environment of Trust  
Building Teams that Work (online, offered on request)  
Leading Change  
Problem Solving and Decision Making  
Situational Leadership

## Management (online)

### Fitness Business Management

Learn how to implement a successful business system in private or commercial health clubs, medically-based fitness facilities, wellness centers, personal training studios, physical therapy centers and corporate fitness centers.

### Fundamentals of Supervision and Management I

Learn the language of the role, how to delegate, motivate, correct and more. The sessions help participants understand how to influence and direct other people's performance, solve problems and resolve conflict.

### Fundamentals of Supervision and Management II

Use this six-week online course to become a more effective manager, building on communication, and interpersonal skills.

## Marketing and Social Media

Learn tools and strategies available to market a website and business on the internet. Hands-on classes allows students to customize and experience various marketing venues, online tools and supportive software. Learn how to build a step-by-step marketing plan, to attract target audiences, keep repeat buyers and generate valuable referrals.

### Non-inclusive course offerings:

Business and Marketing Writing (SBX 8112)  
Internet Marketing Fundamentals (MMG 7030) Small Business Marketing on a Shoestring (SBX 8101)  
OMCP® Social and Mobile Marketing Professional (ETG 8101)  
Retail Customer Service Skills Training (GAT 8040 online course)  
WordPress Blogging Essentials (MMG 7020)

To register, call Customer Service at 704.330.4223 or register from the Corporate and Continuing Education website.

## Notary Public

### Notary Public for New or Renewal Applicants

Notary Public classes provide an introduction to the statutes that regulate the acts of North Carolina notaries public. Find additional information at the Secretary of State website. The purpose of the education requirement is to enable the applicant to become a responsible, qualified candidate for Notary Public commission. This course also serves as qualification for re-commissioning of existing notaries public. A current edition of the Notary Public Guidebook must be purchased prior to participating in class.

Course: Notary Public I (BUS 7116)

### Electronic Notary Certification

This course instructs existing North Carolina notaries public in the legislated procedure required to exercise electronic notarial acts as set forth by the N.C. Secretary of State. Participants must hold a valid commission as a N.C. notary public to qualify for this certification. The course covers the N.C. E-Notary Act, eligibility and registration, E-notary processes, technology solutions and providers, ethics reg. E-notarizations,

consequences of misconduct, security standards, best practices and departmental recommendations. To qualify to become a certified electronic notary, participants must hold a valid commission as a notary public in the state of North Carolina.

Course: Electronic Notary Certification (BUS 7117)

Find Notary Public on the Financial Services Web page of the Corporate and Continuing Education website.

To register for classes, contact customer service at 704.330.4223.

## Public Safety

Central Piedmont offers continuing education in-service training for public safety professionals. Classes are usually offered at the Claudia Watkins Belk Center for Justice on the Merancas Campus. For details on these programs and courses, visit the Public Safety Web page of the Corporate and Continuing Education website.

Courses include:

### American Academy of Applied Forensics

Forensic Computer Examiner\* (online) (ETG 8047)

### Emergency Medical Technician

Clinical Practicum 1 - EM-P (EMT 7921)

Emergency Medical Technician Basic (EMT 7306)

Emergency Medical Technician - Experience Course (EMT 7008)

EMT Paramedic Refresher (EMT 7513)

### Fire Protection Technology

### Law Enforcement

Basic Law Enforcement Training (BLET)

Spanish for Law Enforcement (SPA 7000)

## Public Safety for Healthcare Providers

For complete details about continuing education Public Safety courses, call Customer Service at 704.330.4223 or visit the Emergency Medical Services Training website.

Courses adhere to standards and guidelines of the American Heart Association, the American Academy of Pediatrics and the National Association of EMS Physicians. Not all courses are offered each semester.

The following courses are designed as continuing education for healthcare professionals:

Advanced Cardiac Life Support Renewal

EMT Methodology of Teaching

EMT Renewal

Paramedic Training

Pediatric Advanced Life Support Renewal

Continuing Education Units (CEU) are provided for all participants.

## CPR (Cardiopulmonary Resuscitation) and First Aid

American Heart Association Basic Life Support Courses (CPR) are available for healthcare providers, the general public and any business or industry. All CPR courses are sanctioned by the American Heart Association. Central Piedmont is an American Heart Association Community Training Center. Classes may be provided individually or in combinations for business, industry or personal groups. For information on custom delivery, call the Corporate Learning Center at 704.330.4660.

## Real Estate and Appraisal

Real estate, appraisal and property management courses are offered through the James R. Worrell Sr. Financial Services Institute at Central Piedmont. For details about these courses, find Appraisal and Real Estate under Financial Services on the Corporate and Continuing Education website.

### NC Real Estate Licensing

Real Estate Pre-Licensing

### NC Real Estate Post Licensing

Broker Relationships and Responsibilities  
Contracts and Closing  
NC Laws, Rules and Legal Concepts

### Continuing Education

Mandatory Real Estate Update

### Property Management and Appraisal

Basic Appraisal Principles  
Basic Appraisal Procedures  
Essentials of Community Association Management  
Market Analysis and Highest and Best Use  
Property Management  
The Uniform Standards of Professional Appraisal Practice

Course lists may be incomplete, as programming may change. To register or check for additional courses and those available by request, call customer service at 704.330.4223. For custom delivery or group training, call the Corporate Learning Center at 704.330.4660.

## Transportation, Distribution and Logistics

For complete details about non-credit or continuing education programs and course offerings, visit the Transportation, Distribution, and Logistics Web page of the Corporate and Continuing Education website. Central Piedmont also offers an Associate in Applied Science degree along with certificates in Supply Chain Management and Logistics, now available through generous grant support from JPMorgan Chase. Visit the Supply Chain Management Web page for more details.

### Certified Supply Chain Professional (CSCP)

APICS Certified in Logistics, Transportation, and Distribution Exam Preparation (APX 8001)

The Certified Supply Chain Professional (CSCP) program of the American Production and Inventory Control Society (APICS) is the first comprehensive educational program designed especially for supply chain

management and operations professionals. The CSCP program takes a broad view of operations, extending beyond internal operations to encompass the entire supply chain - from supplier, through the company, to the end consumer.

The program provides professionals with the knowledge necessary to understand and manage the integration and coordination of end-to-end supply chain activities. To earn the APICS CSCP designation, candidates must pass one comprehensive four-hour exam with 175 questions taken from more than 150 references.

### Certified in Production and Inventory Management (CPIM)

Exam preparation review courses are designed for professionals in operations and inventory management who would like to earn the APICS professional CPIM (Certified in Production and Inventory Management) designation. A weekend instructional format allows a concentrated review of topics.

#### Fast Track CPIM Exam Prep courses:

APICS Basics of Supply Chain Management  
APICS Execution and Control of Operations  
APICS Detailed Scheduling and Planning  
APICS Strategic Management of Resources

### Certified in Logistics, Transportation and Distribution (CLTD)

Certified in Logistics, Transportation and Distribution (CLTD) Exam Prep (APX 8001) is a 32-hour course for professionals who want to increase or validate their knowledge and expertise in the field.

### Global Logistics

Employers may work directly with the college for start up or growth to expand operations in global trade. Employers and organizations also may request custom design and delivery of training to employees. Programs range in level of difficulty, length and format while providing either skills and competencies alone or in conjunction with credit-based degrees and certificates.

## Teacher Education

Central Piedmont helps to prepare North Carolina educators in various stages of their careers. For teachers who need to renew their teaching license, courses provide Continuing Education Units (CEUs). See the Corporate and Continuing Education Teacher Education Web page for details.

### Renewal Credit

To learn about teacher renewal courses or to register for a class, call customer service at 704.330.4223. Online classes with flexible starting dates offer various teaching and education topics, including classroom computing, languages, mathematics, reading and writing, and test preparation.

**Please note:** Non-credit continuing education courses do not meet the requirements for an *initial* license. Students taking these courses to renew a teaching license should get verification that courses meet state requirements. Contact the North Carolina Department of Public Instruction at 800.577.7994 (toll-free in-state). Licensure information also is available at the North Carolina DPI website.



## Substitute Training

Substitute Training: Becoming an Effective Substitute Teacher (EDU 7001) is offered several times a year.

## Lateral Entry

Lateral entry teachers are assisted in pursuing their initial teaching licenses. Complete information about these curriculum courses is found at on the Teacher Education - Lateral Entry Web page.

### Courses

Classroom Management and Instruction (EDU 163)

Human Growth and Development (EDU 244)

Learning Theory (EDU 243)

## ESL Instructor Fast-Track Training

English as a Second Language (ESL) Instructor Fast-Track Training (TSL 8500) is a five-module, 30-hour online course for prospective adult literacy instructors on the fundamentals of adult ESL literacy instruction.

## Welding and Inspection

For details about this program, find Welding on the Constuction Web page of the Corporate Continuing Education website.

Course lists below may be incomplete, as programming may change. Check for additional courses or find those available by request or register by calling customer service at 704.330.4223. For custom group training and certifications, contact the Corporate Learning Center at 704.330.4660.

## AWS Testing Certification

AWS testing facilities at Central Piedmont are located at the Harper Campus on Hebron Street in southwest Charlotte.

AWS Welding Certification - Single Position Plate Test (WLX 7121)

AWS Welding Certification - Multiple Position Plate Test (WLX 7122)

AWS Welding Certification - Single Position Pipe Test (WLX7123)

Skills Practice for Experienced Welders (WLX7076) Practice only; no classroom instruction

Practice welding skills for an AWS test, interview or work under the supervision of an experienced instructor in the welding lab. Students must provide all personal protection equipment. Standard testing materials are provided.

## Non-destructive examination (NDE)

NDE is a way of examining material without damaging it to find hidden indications of potential flaws. With aging bridges, roadways, power plants and other infrastructure, more job opportunities exist for those trained to perform inspections.

Introduction to NDE (NDX 8012)

Learn more about non-destructive examination through this introductory online course. Modules are self-paced, with vivid graphics and videos describing the six different NDE methods.

NDE Visual Testing Level 1, 2 (NDX 8005)

Online course offering self-paced modules, introducing the Visual Testing method

NDE Visual Testing Level 1,2 Practicum (NDX 7005)

Ultrasonic Testing - Level I (WLX 7013)

Ultrasonic Testing - Level II (WLX 7014)

Level I & II Magnetic Particle Testing (NDX 7011)

## Corporate Learning Center

The Corporate Learning Center serves the learning and development needs of businesses and organizations in Mecklenburg County. The span of relevant learning topics, expertise, and experience offered uniquely positions the college to help meet company performance and organizational demands. Services are organized into three tracks:

- training and development
- organizational effectiveness
- workplace learning

The center partners with instructional areas across the college, both curriculum (credit-based) and continuing education (non-credit), to provide training and customized services to employers. One example is a recent collaboration between the college's James R. Worrell Financial Services Institute and a large financial institution to provide mortgage-related training to more than 1,300 employees. The center may also work beyond Mecklenburg County to serve national and global clients.

Corporate Learning Center resources include:

- Training and Development
  - Business Competencies
  - Computer Technology
  - Customer Service
  - Customized Business Solutions for Advanced Manufacturing
  - Engineering Technologies
  - Leadership and Management
  - Organizational Effectiveness
  - Process Improvement
- Economic Development Partner Resources (state, local and regional)
- Small Business Center
- Workplace Learning and Apprenticeship Charlotte

To inquire about custom or group training needs, contact the Corporate Learning Center at 704.330.4660 or visit the Corporate Learning Center website.

## Personal Enrichment

Find balance, pleasure and discovery in life through continuing education courses designed for recreation, leisure and personal enrichment. Offered year-round and throughout Mecklenburg County, these courses do not earn college credit. The continuing education focus is on individual well-being and lifelong learning. Categories and topics vary in length from short seminars of a few hours to 30 hours or more of in-depth instruction. Most of these courses are fee-based, and all are open to the public.

Many personal enrichment courses are introductory and do not require any specific skill level or prerequisites. Some, however, are designed in progressive sequence from beginner to the more advanced. Courses span many areas of interest with topics including arts, floral design, sewing, interior decorating, music, fitness, wellness, gardening, foreign languages, cooking, motorcycle safety and personal finance.

A new cycle of continuing education courses is generally available each semester (spring, summer and fall). Registration and payment typically is available until the starting date of classes unless the course

reaches maximum enrollment or is canceled. No enrollment application or transcripts are required.

Search for courses by topic(s) using a keyword or words in the online tool Schedule Builder on the college website home page.

To learn more, visit the Personal Enrichment Web page of the Corporate and Continuing Education website, or call customer service at 704.330.4223 to register for classes.

## Arts

Explore all things creative, including creative writing, dance, drawing and painting, film critique, mixed media and music. Popular courses include those on the following lists. New or updated courses are often added to refresh the choices and to meet new interests and requests. For the latest offerings, check with Customer Service at 704.330.4223 or search by topic on Schedule Builder from the Continuing Education website.

### Topics include:

#### Dance

- Adult Ballet (AAC 8070)
- Broadway Dance: Tap (AAC 8000)
- Carolina Shag (REC 8955)

#### Drawing and Painting

- Basic Acrylic Painting Techniques (AVO 8748)
- Basic Oil Painting Techniques (AVO 8500)
- Basics of Colored Pencil Drawing (AVO 8657)
- Basic Watercolor Techniques (AVO 8730)
- Drawing Techniques I & II (AVO 8558)
- Exploring Painting Media (AAC 8027)
- Intermediate Painting Techniques (AVO 8746)
- Urban Sketching with Ink and Watercolor (AVO 8568)

#### Music

- Folk Harp Ensemble (AAC 8007)
- Folk Harp Ensemble II (AAC 8024)
- Piano for Beginners (AAC 8018)
- Piano for Beginners Level 2 (AAC 8019)

#### Writing

- Writing Essentials (JOU 7014)
- Write Fiction Like a Pro (EDG 8044)

## Automotive

Central Piedmont offers a variety of courses on the repair and operation of vehicles and small engines. Some of the popular courses are listed; however, new classes may be added during the year. For the latest list of courses and to register, contact Customer Service at 704.330.4223.

### Topics Include:

Auto Body Restoration (AUX 9300)  
Basic Small Engine Repair (AUX 7403)  
Basic Small Engine Overhaul (AUX 7404)

## Charlotte Cooks™

Expert, friendly instructors guide learning and practice as students prepare delicious meals, desserts and more in professional kitchens. Package courses combine two or more courses in a skill or focus area and offer convenient single registration and cost savings. New or updated courses often are added to refresh the choices and to meet new interests and requests. For the latest offerings, check with Customer Service at 704.330.4223 or search by topic on Schedule Builder from the Continuing Education website.

The option to experience Charlotte Cooks' team-building sessions also is available by request through the Corporate Learning Center by calling 704.330.4660. Fun and popular sessions may be customized, hands-on and affordable for groups, businesses and special occasions.

### Topics include:

#### Baking and Pastry

#### Beer and Wine

#### Cooking Classes

#### Boot Camps

#### Class Packages

#### Purchase Professional Tools

#### Food Allergy Intolerance Disclaimer

## Home

For the latest offerings, check with Customer Service at 704.330.4223 or search by topic on Schedule Builder from the Corporate and Continuing Education website. New or updated courses often are added to refresh choices and to meet new interests and requests for personal pleasure, skills and discovery.

### Topics include:

#### Floral Design

- Fall and Holiday Floral Designs for Your Home (AVO 8569)
- Floral Certificate Part 1: Basic Floral Designs (AVO 8573)
- Floral Certificate Part 2: Intermediate Floral Designs (AVO 8602)
- Floral Certificate Part 3: Master Floral Designs (AVO 8574)
- Floral Certificate Part 4: Wedding Flowers (AVO 8575)
- Floral Certificate Part 5: Sympathy Flowers (AVO 8710)

#### Interior Design for Your Home

- Color, Finishes, and Windows for Your Home (DES 8101)
- Space Planning/Furniture Arrangement/Lighting for Your Home (DES 8102)
- Furniture: Mix and Match for Your Signature Style (DES 8103)
- Art, Accessories, and Outdoor Spaces for Your Home (DES 8104)
- Introduction to Home Staging (DES8106)
- The Art of De-cluttering: Clutter Intervention (DES 8108)

#### Sewing

- Sewing I (HMK 8757)
- Sewing II (HMK 8751)
- Sewing III - Pattern Adjustment and Interpretation (SEW 8103)
- Professional Alterations I (SEW 8300)
- SEW 8301: Professional Alterations II

## Programs of Study

- Learn to Use Your Own Sewing Machine (HMK 8779)
- The Art of Quilting (HMK 8397)

### Construction

- Tile Your Home (HOM 7003)

### Personal Finance

Central Piedmont offers courses to help individuals understand finances and improve their financial future. Whether participants are just out of high school or planning for retirement, programs provide the knowledge and skills to allow them to take charge of their finances.

#### Topics Include:

Introduction to Stock Options (ECO 8051)  
Real Estate Investing (REX 7406)  
Retirement Planning Today (ECO 8205)

The Corporate Learning Center can customize or tailor presentations to specific employees or private groups. Call the Corporate Learning Center at 704.330.4660 for questions or a quote.

### Recreation and Wellness

Select from time honored disciplines, fitness-based activities or choose unique health offerings - all designed to improve one's life. Classes in Yoga, Tai Chi, Pilates, dance, sports classes, and more get students moving and on a path to better health. Great facilities on various campuses welcome all levels of participants. Participants may set their own pace with no annual commitment or fees.

New or updated courses often are added to refresh choices and to meet new interests and requests. Online courses are offered, too! For the latest offerings, check with Customer Service at 704.330.4223 or search by topic on Schedule Builder from the Continuing Education website.

#### Topics Include:

##### Fitness

- Personal Trainer National Certification (WT 7000)  
A Central Piedmont partnership with World Instructor Training Schools (WITS) allows students to become Certified Personal Trainers prepared to work one-on-one with clients in fitness facilities. Study focuses on anatomy, exercise physiology, nutrition, musculoskeletal injuries, health assessments and more. Students must hold current Cardiopulmonary Resuscitation (CPR) certification to qualify for the exam. CPR certification is not required for class participation. Additional courses are available to provide Continuing Education Unit (CEU) credits. To learn more about current courses available, contact Customer Service at 704.330.4223, or use the online Schedule Builder to enter keyword terms, including "personal trainer."
- Tai Chi for Health (LLI 7058)
- Yoga for Beginners (REC 8301)

##### Personal Safety

Gain confidence and learn self defense in hands-on courses. Learn tips and techniques from top, experienced safety experts. For the latest offerings, check with Customer Service at 704.330.4223 or search by topic on Schedule Builder from the Continuing Education website. Exclusive Self Protection for Women classes are available for group or custom delivery through the Corporate Learning Center by calling 704.330.4660 for a quote.

##### Sports

Enjoy learning a new sport at Central Piedmont or polish skills while meeting new people and getting expert instruction. Classes are small and offered at convenient times for a great experience - and a great workout!

- Golf for Beginners (REC 8401)
- Tennis for Beginners

## Small Business Center

The Small Business Center at Central Piedmont exists to cultivate the entrepreneurial community and stimulate local jobs by assisting individuals launch and/or expand their business. The Small Business Center accomplishes this by providing affordable, accessible, high-quality training and knowledge-sharing opportunities to help clients achieve their business goals.

Part of the statewide Small Business Center Network (SBCN), The Small Business Center uses state community college funding to provide many of the resources, including counseling, at no cost to the client or student.

Resources and Services include:

- business counseling, including partner referrals for expanded and professional services
- forums and networking events
- a Business Resource Center located on Central Campus, including touch-down computers with specialized software and research capabilities
- seminars and webinars
- continuing education short courses and programming for start-up needs and for growing businesses, including the popular QuickBooks and food business classes

For details, visit the website for the Central Piedmont Small Business Center or call 704.330.6736.

Customer service and registration for Corporate and Continuing Education is available by calling 704.330.4223.

## Workplace Learning

Workplace Learning covers three main learning opportunities:

1. Work-based Learning (formerly Cooperative Education or Co-op)
2. Internships
3. Apprenticeship Charlotte

For more information:

- > Visit the Workplace Learning Office on Central Campus in the Elizabeth Office Building
- > Call 704.330.6217
- > Email [workplace.learning@cpcc.edu](mailto:workplace.learning@cpcc.edu)
- > Visit the Workplace Learning Web page

Locations for Workplace Learning offices on all Central Piedmont campuses are listed in the college directory.

## Work-based Learning

Work-based Learning (formerly Cooperative Education or Co-op) is an academic college class that blends classroom learning with practical work experience. Instead of attending class in a traditional classroom, students

work with an employer in a position directly related to their field of study. Work-based Learning is similar to an internship, but students receive academic credit either as an elective or as a required class. Through partnerships with the business community, students gain work experience that increases their chances of finding career-related employment upon completion. Employers have the opportunity to connect with students as faculty support them throughout the experience. Work-based Learning experiences may be paid or unpaid.

### **Eligibility**

Students are accepted from various programs of study, provided they meet the following criteria:

1. They must be enrolled in an approved Central Piedmont Work-based Learning curriculum program of study.
2. They must meet GPA and course completion eligibility requirements as established by the programs of study and/or state regulations.
3. They must be recommended by the program faculty coordinator.
4. They must be approved by the Workplace Learning office. Placement is not guaranteed for all eligible students.
5. Students who meet certain criteria may qualify to receive academic credit for a Work-based Learning experience at their current job.

*Placement is not guaranteed for all eligible students.*

## **Internships**

Internships are flexible, non-credit bearing work experiences that allow students and recent graduates to gain exposure to their field. Internships enable students to further build related work experience and enhance their portfolios, and are an option in programs where work-based learning is unavailable. Upon successful completion of an internship, participants will receive a certificate acknowledging their achievement.

Eligibility to participate in a internship that is not for academic credit varies based on the program of study. Contact the Workplace Learning office for details.

## **Apprenticeship Charlotte**

Apprenticeship Charlotte connects talented students to local employers. By combining classroom and workplace learning, both the employers and selected students share a valuable experience that produces immediate results. Employers often cover the cost of tuition, fees and books for apprentices, and many times offer full-time employment upon successful completion of an apprenticeship. Employers benefit from having highly skilled employees in positions that are difficult to fill.

To learn more about participating in an apprenticeship, potential students should visit the Apprenticeship Charlotte website or send an email to [workplace.learning@cpcc.edu](mailto:workplace.learning@cpcc.edu).



# Courses/Course Registration



# Courses / Course Registration



Regardless of where students are on their academic path, Central Piedmont has the resources needed to help them find success.

## Career & College Promise Courses During High School

Qualified students of high school age in North Carolina have the opportunity to complete college-level credits, tuition free, while they are in high school, allowing them to get a jump-start on their workplace and college preparation.

## College and Career Readiness Courses

The College and Career Readiness department at Central Piedmont takes a student-focused approach to helping students develop vital academic and work readiness skills needed to transition to college-level coursework or seek employment. Classes range from English as a Second Language to High School Equivalency Preparation, Adult High School and Pathways to Careers.

## Developmental Courses

Developmental courses are for students who have not reached college-level in the areas of English, reading, mathematics, biology or chemistry. Initial student placement in developmental courses is based on individual college placement testing policies and procedures. Students should begin developmental course work at the appropriate level indicated by their placement test.

## College-Level Curriculum Courses

Central Piedmont has developed a variety of affordable, two-year degree and online learning programs that respond to the immediate needs of the local workforce, including the areas of science, technology, engineering, math and more.

## Corporate and Continuing Education Courses

Students can choose from hundreds of non-degree courses and programs at Central Piedmont. Whether someone wants to learn new job skills, enhance workforce competitiveness in the marketplace or explore a new hobby in a personal enrichment class, Corporate and Continuing Education courses are the solution.

## Career and College Promise Courses

### Approved Academic Pathways for Dual Enrollment during High School

High school students in the Career & College Promise Programs may follow two types of academic plans:

1. College Transfer Pathways, and
2. Career and Technical Pathways.

**Students may take courses only in their selected pathways. If CCP students register for classes outside of their chosen pathways, the college will drop registration of those classes.**

Students may choose:

- two Career and Technical Pathways at a time, or
- one Career and Technical Pathway plus one Transfer Pathway at a time.

See which courses may be taken for Academic Pathways on the Career and College Promise website. Once a program under one of the pathways is selected, course descriptions and any required pre-requisites may be seen by entering any course code (example: ABC 123) in the Search Catalog field above the left menu.

## College and Career Readiness Courses

### Enroll in Classes

#### Adult English as a Second Language

- ESL (p. 258)**College and Career** (ECC) Courses
- ESL (p. 259)**Community** (ECO) Course
- ESL (p. 258)**Crossroads Cafe'** (CDL) Course
- ESL (p. 259)**Distance Learning** (EDL) Course
- ESL (p. 259)**Integrated Learning Resource** (ILR) Course
- ESL (p. 259)**Transitions** (EST) Course
- **Working in America** (ECV) Courses

#### Adult High School Diploma

- Adult High School (HSD) Courses (p. 259)
- Adult High School (p. 264)**Learning Resource** (HLR) Course

## Bridges Courses (Pre-High School Equivalency Preparation)

- Math Sense (ABL) Course (p. 264)
- **Bridges Language Arts** (BLA) Courses - Pre-High School Equivalency (p. 264)
- **Bridges Learning Resource** (BLR) Center - Pre-High School Equivalency (p. 264)
- **Bridges Math** (BMA) Courses - Pre-High School Equivalency (p. 265)

## HSE-High School Equivalency Instruction

- GED (p. 265)**Learning Resource** (GLR) Center
- High School Equivalency (p. 265)**Community** (HCO) Course
- High School Equivalency (p. 265)**Distance Learning** (HDL) Course
- High School Equivalency (p. 265)**Language Arts** (HLA) Course
- High School Equivalency (p. 265)**Math** (HMA) Course
- High School Equivalency (p. 265)**Science** (HSI) Course
- High School Equivalency (p. 266)**Social Studies** (HSS) Course

## Independence and Literacy Education for Adults with Disabilities (I-LEAD)

- I-LEAD (FED) Courses (p. 266)
- I-LEAD (p. 266)**Community** (FCO) Courses

## Pathways to Careers

- Pathways (p. 266)**A+ Certification** (PWI) Course
- Pathways (p. 266)**Computer Integrated Machining** (PWM) Course
- Pathways (p. 267)**Developmental Disabilities** (PWD) Course
- Pathways (p. 267)**Early Childhood Education** (PWE) Course
- Pathways (p. 267)**Learning Resource** (PLR) Course
- Pathways (p. 267)**Office Administration** (PWO) Course
- Pathways (p. 267)**Welding** (PWW) Course

## ESL Crossroads Cafe' (CDL)

### **CDL 6000. Crossroads Cafe Civics D L Multilevel. 0.0 Hours.**

Class-1500.0. Clinical-0.0. Lab-0.0. Work-0.0

This course provides English language instruction at a distance delivered in video format. Emphasis is placed on developing listening, speaking, reading, and writing skills in context of Civics Education. Upon completion, students should be able to communicate more effectively in all modalities of English and demonstrate increased understanding of Civics topics.

### **CDL 6000. Crossroads Cafe Civics D L Multilevel. 0.0 Hours.**

Class-1500.0. Clinical-0.0. Lab-0.0. Work-0.0

This course provides English language instruction at a distance delivered in video format. Emphasis is placed on developing listening, speaking, reading, and writing skills in context of Civics Education. Upon completion, students should be able to communicate more effectively in all modalities of English and demonstrate increased understanding of Civics topics.

## ESL College and Career (ECC)

### **ECC 6000. College & Career Multilevel. 0.0 Hours. Class-68.0.**

Clinical-0.0. Lab-0.0. Work-0.0

This course is designed to build and expand upon students' proficiency in listening, speaking, reading, and writing. Emphasis is placed on building a wide range of communicative skills, increasing work-readiness, and improving digital literacy. Upon completion, students should be able to communicate basic information in English and demonstrate a higher degree of work readiness.

### **ECC 6007. College & Career Literacy. 0.0 Hours. Class-80.0.**

Clinical-0.0. Lab-0.0. Work-0.0

This course introduces students to basic literacy concepts, the English alphabet, and key vocabulary skills. Emphasis is placed on the development of oral and written communication skills. Upon completion, students should be able to share personal information, complete basic work-related functions, and demonstrate improved digital literacy.

### **ECC 6009. College & Career Beginning High. 0.0 Hours. Class-80.0.**

Clinical-0.0. Lab-0.0. Work-0.0

This course is designed to expand student proficiency in listening, speaking, reading, and writing. Topics include basic grammar and mechanics, reading, sentence/paragraph writing, listening, and speaking. Upon completion, students should be able to communicate in social situations and basic workplace environments and demonstrate improved digital literacy.

### **ECC 6010. College & Career Intermediate Low. 0.0 Hours. Class-80.0.**

Clinical-0.0. Lab-0.0. Work-0.0

This course provides further development for students' comprehension of spoken and written English. Emphasis is placed on routine social conversations, more complex reading and writing exercises, and more detailed workplace instructions. Upon completion, students should be able to communicate more complex topics in English and demonstrate improved digital literacy.

### **ECC 6011. College & Career Intermediate High. 0.0 Hours. Class-90.0.**

Clinical-0.0. Lab-0.0. Work-0.0

This course provides career-infused content that expands student exposure to instruction aimed at enhancing preparation for workplace skills. Emphasis is placed on academic rigor needed for transition to post-secondary education and/or career opportunities. Upon completion, students should be able to transition to the advanced level of ESL with career-contextualized language. Contact hours may vary from approximately 70-90 for maximum instructional exposure.

### **ECC 6102. College & Career Advanced. 0.0 Hours. Class-90.0.**

Clinical-0.0. Lab-0.0. Work-0.0

This course provides career-infused content that prepares students as they transition out of ESL and into post-secondary academic and career options. Emphasis is placed on complex language skills, academic rigor, and critical thinking skills required in college level coursework and the workplace. Upon completion, students should be able to transition to further education and/or job training opportunities.



## ESL Community (ECO)

**ECO 6000. Ventures Multilevel Life & Work. 0.0 Hours.** Class-1500.0. Clinical-0.0. Lab-0.0. Work-0.0

This course provides English language instruction customized to various student levels of proficiency. Emphasis is placed on developing listening, speaking, reading, and writing skills as well as work readiness. Upon completion, students should be able to communicate more effectively in all modalities of English and demonstrate increased readiness for work or continuation of studies. The course is offered at a variety of community sites in Mecklenburg County.

## ESL Distance Learning (EDL)

**EDL 6000. E S L English Distance Learning Multivl. 0.0 Hours.** Class-1500.0. Clinical-0.0. Lab-0.0. Work-0.0

This course provides English language instruction at a distance delivered through internet-based instruction. Emphasis is placed on developing listening, speaking, reading, and writing skills in the context of Civics Education and work readiness. Upon completion, students should be able to communicate more effectively in all modalities of English and demonstrate increased understanding of Civics topics.

**EDL 6000. E S L English Distance Learning Multivl. 0.0 Hours.** Class-1500.0. Clinical-0.0. Lab-0.0. Work-0.0

This course provides English language instruction at a distance delivered through internet-based instruction. Emphasis is placed on developing listening, speaking, reading, and writing skills in the context of Civics Education and work readiness. Upon completion, students should be able to communicate more effectively in all modalities of English and demonstrate increased understanding of Civics topics.

## ESL Integrated Learning Resource (ILR)

**ELR 6000. Learning Resource Ctr Multilevel. 0.0 Hours.** Class-1500.0. Clinical-0.0. Lab-0.0. Work-0.0

This course provides students with targeted, level-specific lessons to assist them in acquiring English language proficiency and preparation for their future in the United States. Emphasis is placed in all modalities, including listening, speaking, reading, writing, grammar, and vocabulary instruction. Small group lessons and technology integration allow for differentiated learning. Upon completion, students are prepared to handle routine entry level positions which involve some written or oral English communication. Students may be dual enrolled in the ESL LRC and in seated ESL courses for additional support and practice.

## ESL Transitions (EST)

**EST 6000. English As a Second Language Transitions. 0.0 Hours.** Class-70.0. Clinical-0.0. Lab-0.0. Work-0.0

This course is designed to build students' language and math skills that are needed to successfully participate in introductory STEM-related (Science, Technology, Engineering, & Math) coursework. Emphasis is placed on reading, writing, speaking, listening, and critical thinking skills. Upon completion, students should be able to apply their language and communication skills to academic and work-related assignments. Contact hours may vary from approximately 70-90 for maximum instructional exposure.

## EL Civics (ECV)

**ECV 6000. El Civics. 0.0 Hours.** Class-1500.0. Clinical-0.0. Lab-0.0. Work-0.0

This course includes technology-enhanced civic engagement content embedded with reading, writing, listening, and speaking skills instruction. Upon completion, students should be able to better acclimate to American culture and its system and transition the workplace, college and other post-secondary training, or to other areas of the College and Career Readiness program. Integrated topics include careers, soft skills training, advanced English for the workplace, resumes, interviews, job search.

## Adult High School (HSD)

### Computer Literacy

### HSD 6068 Computer Literacy I

This course provides a brief overview of computer concepts. Emphasis is placed on the use of personal computers and software applications for personal use as well as the work environment. Upon completion of this course, students will be able to demonstrate basic computer skills, using Microsoft Office Professional Applications, such as Word, PowerPoint and Excel. Students also will have a working knowledge of the Internet and be able to successfully navigate the World Wide Web.

### English

### HSD 6002 High School Diploma English I

This course introduces the basic study of grammar and develops writing mastery through the writing process. Types of writing include narrative and descriptive paragraphs and essays. Vocabulary development, reading comprehension and oral communication skills also are introduced.

### HSD 6003 High School Diploma English II

This course expands on skills in reading, writing and oral communication that were introduced in English I. New concepts and skills are added to give students a basic foundation in English grammar, punctuation and vocabulary. Students are expected to demonstrate a mastery of these skills.

### HSD 6004 High School Diploma English III

This course emphasizes literature with a focus on understanding the definition and application of certain literary terms as applied to selected passages. Writing includes the development of comparison-and-contrast research papers relating to literary selections. Application of grammar skills learned in all levels of English is reviewed.

### HSD 6005 High School Diploma English IV

Students increase their knowledge of grammar, reading comprehension and vocabulary by focusing on the writing and punctuation of a variety of sentence types, a review of the parts of speech and regular use of the newspaper. A major emphasis in this course is on writing persuasive research papers.



## Mathematics

### HSD 6013 Applications of Mathematics

This course expands the basic math skills to include the solution of word problems involving percent applications, proportions, reading charts and graphs for information, estimation, working with measurement and basic geometry concepts. Applications of the use of math in real-life situations are emphasized throughout the course.

### HSD 6014 Pre-Algebra

This course builds a foundation for algebra. Topics covered include subsets of the real numbers, simplifying radicals, properties of the real numbers, prime factorization, the language of algebra, working with signed numbers, combining like terms, solving first degree equations, setting up and solving word problems as well as solving and graphing inequalities.

### HSD 6040 Algebra I

Upon completion of this course, students should be able to solve problems using the symbolism of algebra, solve first degree equations, recognize and graph linear equations, solve systems of two equations, manipulate literal equations, recognize and use properties of real numbers, simplify expressions containing exponents, multiply polynomials and factor polynomials.

### HSD 6044 Geometry

This course stresses plane geometry with a brief overview of trigonometry and solid geometry. Upon completion of this course, students should be able to do simple proofs, problem solve, demonstrate basic geometric constructions and use a scientific calculator to solve problems.

## Health

### HSD 6085 Health

This course is an exploration into health in relation to our bodies, our environment and careers. Topics include exercise and nutrition, pollution and X-ray technology. Field trips, speakers and hands-on activities are offered along with the book work.

## History

### HSD 6022 United States History

Upon completion of this course, students should be able to recount major events in U.S. history from Columbus to the present, reflecting the development and changes in economic, social, political and foreign policy in relation to these events.

### HSD 6023 Government and Economics

This course is designed to give students a basic overview of critical issues related to government and economics. The study of government emphasizes the United States Constitution as it relates to the structure of our national government and to the rights of individuals in our society. The study of economics involves a discussion of key economic systems and their influences on public issues. Application of these concepts to current events and practical situations is emphasized throughout the course.

### HSD 6024 World Cultures

This course is a topical review of the beginnings of civilizations in the Mesopotamian basin to an analysis of the political and economic climate

fostering the democratization of the world in the modern era. Students should be able to develop an appreciation for cultural differences and similarities of the peoples of the world as they relate to evolving economic, religious, social and political customs.

## Science

### HSD 6032 Physical Science

This course introduces the basic laws and principles of chemistry and physics. Topics include the scientific method, motion, energy, machines, the nature of matter, atomic structure, chemical bonds, waves, light, sound and electricity. Upon completion, students will be able to demonstrate an understanding of basic physical science concepts.

### HSD 6033 Biology

This course is a basic study of biological concepts and principles of biology. Upon completion, students should be able to demonstrate an understanding of the nature of science, cell structure and function, chemical and physical basis of life, diversity and classification of living things, genetic inheritance, human anatomy and physiology and the influence of human activity on the environment.

### HSD 6038 Earth/Environmental Science

This course introduces the principles of environmental science. Topics include ecosystems, populations, communities, the interconnectivity of living organisms, conservation, effects of human activity on the environment, renewable and nonrenewable resources and energy flow. Upon completion, students will be able to demonstrate an understanding of basic ecological concepts.

## Electives

### HSD 6007 The World Today

This course focuses on providing the student with information on dramatic issues, events and topics that shaped the 1990s. Class discussion and research along with the textbook help identify the major developments to be examined.

### HSD 6008 You and the Law

This course introduces a few of the many areas in which the law operates, providing students with some idea of the countless ways in which the law may affect their everyday life.

### HSD 6072 Career Planning

This course, through a variety of activities, is designed to help students discover their interests and possible careers. They are taught to set goals and how and where to acquire information and tools necessary for success in a job or in college.

### HSD 6074 Psychology

This course examines various theories of psychology, giving students an overview of what it is and how it is used in today's society. Field trips, speakers and hands-on activities are included in the curriculum.

## HSD 6075 Errors in Reasoning: Games, Puzzles, Etc.

Upon completion, students will be able to identify three types of errors people make in solving problems. Students will learn to verbalize a systematic, problem-solving process and apply the process to different problems. Each student will learn to observe and use all available facts to solve problems. These skills build confidence in problem solving.

## HSD 6077 Unlocking the Printed Page

Upon completion of this course, students will be more confident with a variety of reading materials. Students will learn the appropriate reading strategies for English, history, math and science materials as well as short stories and essays. Emphasis is placed on building students' vocabulary through context clues, identifying relationships and dictionary skills.

## HSD 6078 Creative Writing

This course is designed to offer students the experience of four different genres in literature: autobiography, the short story, poetry and playwrights. Along the way, students learn various terms and create a portfolio of their own works in these specific genres for a final grade. Emphasis is placed on knowledge of genre components, comprehension, creative enthusiasm and participation.

## HSD 6015 Study Skills

This course is designed to allow students the opportunity to receive additional instructional support in a Learning Resource Center (LRC). Web-based instruction is provided through online software. This course is not offered for high school credit; therefore, students can enroll in study skills as frequently as they deem necessary.

**HSD 6002. Adult High School English I. 1.0 Hour.** Class-120.0. Clinical-0.0. Lab-0.0. Work-0.0

This course introduces students to literature and composition while developing vocabulary, spelling, grammar, speaking, and listening skills. Topics include parts of speech and an introduction to a Shakespearean play. Upon completion, students should be able to know meanings of various literary terms and analyze multiple interpretations of stories, poems, plays, etc.

**HSD 6003. Adult High School English II. 1.0 Hour.** Class-120.0. Clinical-0.0. Lab-0.0. Work-0.0

This course introduces literary global perspectives focusing on literature from the Americas, Africa, Eastern Europe, Asia, and the Middle East. Topics include influential U.S. documents and a Shakespearean play. Upon completion, students should be able to analyze how complex characters develop over the course of a text and advance/develop the plot/theme.

**HSD 6004. Adult High School English III. 1.0 Hour.** Class-120.0. Clinical-0.0. Lab-0.0. Work-0.0

This course introduces students to an in-depth study of U.S. literature and U.S. literary nonfiction. Topics include foundational works and documents from the 17th century and at least one Shakespearean play. Upon completion, students should be able to demonstrate knowledge of 18th, 19th, and early 20th century works of American literature.

**HSD 6005. Adult High School English IV. 1.0 Hour.** Class-120.0. Clinical-0.0. Lab-0.0. Work-0.0

This course is designed to complete the global perspective initiated in English II while focusing on European literature. Topics include important U.S. documents, literature (texts influenced by European philosophy or action), and at least one Shakespearean play. Upon completion, students should be able to write and critique research papers and understand the European influence on American literature.

**HSD 6008. You and the Law. 1.0 Hour.** Class-120.0. Clinical-0.0. Lab-0.0. Work-0.0

This course provides an overview to American law and how it operates in the United States. Topics include the Constitution, the judicial system, and the difference between state and federal laws. Upon completion, students should be able to explain multiple ways in which the law may affect their everyday lives.

**HSD 6012. Adult High School Mathematics I. 1.0 Hour.** Class-120.0. Clinical-0.0. Lab-0.0. Work-0.0

This course includes a review of whole numbers, fractions, mixed numbers, decimals, ratios, rates and proportions, percent, and concepts in statistics. Topics include real numbers, solving equations and inequalities. Upon completion, students should be able to simplify integers and identify properties, as well as, solve one and multi-step algebraic equations and inequalities.

**HSD 6013. Adult High School Mathematics II. 1.0 Hour.** Class-120.0. Clinical-0.0. Lab-0.0. Work-0.0

This course introduces geometry and further develops algebra skills for academic and career success. Topics include geometry and measurements, graphing (linear equations- slope), and systems of linear equations. Upon completion, students should be able to solve every day work-related problems with applications to life skills, budgeting, and career fields. Math I is a prerequisite to this course.

**HSD 6014. Adult High School - Mathematics III. 1.0 Hour.** Class-1500.0. Clinical-0.0. Lab-0.0. Work-0.0

This course is designed to help students apply using Algebraic and Geometric functions from previous learning. Topics include expanding their knowledge of algebraic expressions by working with exponents, polynomials, and radical functions. Upon completion, students should be able to identify exponent properties, perform all operations with polynomials and radical expressions (working with complex numbers), and solve everyday work-related problems. Math I and Math II are prerequisites to this course.

**HSD 6016. Adult High School Math IV. 1.0 Hour.** Class-120.0. Clinical-0.0. Lab-0.0. Work-0.0

This course introduces rational exponential expressions and equations, exponential and logarithmic functions, and basic trigonometry. Topics include working with functions, operations with functions, and inverse functions. Upon completion, students should be able to successfully complete the arithmetic, elementary algebra, and master parts of college-level math placement tests.

**HSD 6021. Adult High School US History I. 1.0 Hour.** Class-120.0. Clinical-0.0. Lab-0.0. Work-0.0

This course introduces the history of the United States from the Age of Discovery through the Civil War. Topics include geographical, political, economic and cultural development of the American people and U.S. events. Upon completion, students should be able to understand the establishment of political parties and America's westward expansion.

**HSD 6022. Adult High School Us History II. 1.0 Hour.** Class-120.0. Clinical-0.0. Lab-0.0. Work-0.0

This course introduces major events occurring in American History from 1865 (post-Civil War) to the present. Topics include Reconstruction, Westward Expansion, Industrial Development, and the Great Depression. Upon completion, students should be able to understand World Wars I & II and the events of the Cold War and Post-Cold War periods.

**HSD 6023. Adult High School- Gov/Econ. 1.0 Hour.** Class-120.0. Clinical-0.0. Lab-0.0. Work-0.0

This course is designed to give students a basic overview of critical issues related to government and economics. Topics include the U.S. Constitution as it related to the structure of national government and economic systems and their influences on public issues. Upon completion, students should be able to apply these concepts to current events and practical situations emphasized throughout the course.

**HSD 6025. HSD-6025 World History. 1.0 Hour.** Class-120.0. Clinical-0.0. Lab-0.0. Work-0.0

This course provides an examination of why people think and behave as they do in relationships, groups, institutions, and societies. Topics include individual and group identity, social structures and institutions, social change, and social dynamics in recent and current events. Upon completion, students should be able to understand the effects of social change on individuals and the research methods used by scientists. This is an elective course.

**HSD 6026. Adult High School Sociology. 1.0 Hour.** Class-120.0. Clinical-0.0. Lab-0.0. Work-0.0

This course covers an examination of why people think and behave as they do in relationships, groups, institutions, and societies. Topics include individual and group identity, social structures and institutions, social change, and social dynamics in recent and current events. Upon completion, students should be able to understand the effects of social change on individuals and the research methods used by scientists.

**HSD 6028. Adult High School Multicultural Studies. 1.0 Hour.** Class-120.0. Clinical-0.0. Lab-0.0. Work-0.0

This course provides an examination of the United States as a multicultural nation. Emphasis is placed on the perspectives of minority groups. Upon completion students should be able to appreciate how race, culture and ethnicity, and identity contribute to their experiences. This is an elective course.

**HSD 6032. High School Diploma - General Science. 1.0 Hour.** Class-120.0. Clinical-0.0. Lab-0.0. Work-0.0

This course introduces the basic laws and principles of chemistry and physics. Topics include motion, energy, machines, and the nature of matter, atomic structure, chemical bonds, waves, light, sound and electricity. Upon completion, students should be able to demonstrate an understanding of basic physical science concepts.

**HSD 6033. AHS Diploma - Biology. 1.0 Hour.** Class-120.0. Clinical-0.0. Lab-0.0. Work-0.0

This course introduces a basic study of concepts and principles of Biology. Topics include cell structure and function, chemical and physical basis of life, diversity and classification of living things. Upon completion, students should be able to understand genetic inheritance, human anatomy, and the influence of human activity on the environment.

**HSD 6038. Ahs Diploma- Earth/Environmental Science. 1.0 Hour.** Class-120.0. Clinical-0.0. Lab-0.0. Work-0.0

This course introduces the study of the earth and principles of environmental science. Topics include ecosystems, communities, interconnections of living organisms, conservation, and effects of human activity on the environment. Upon completion, students should be able to demonstrate an understanding of basic ecological concepts.

**HSD 6048. Adult High School Financial Literacy. 1.0 Hour.** Class-120.0. Clinical-0.0. Lab-0.0. Work-0.0

This course is designed to help students gain personal finance skills and extend their problem-solving skills. Topics include financial planning, income, taxation, budgeting, savings accounts, checking accounts, and electronic banking. Upon completion, students should be able to develop their own financial plan for earning, spending and saving money. This is an elective course.

**HSD 6053. AHS Essentials of Business I. 0.0 Hours.** Class-1500.0. Clinical-0.0. Lab-0.0. Work-0.0

This course introduces students to the goals, processes, and operations of business enterprises using a project based model to encourage student inquiry and research. Emphasis placed on the functions necessary to effectively manage a company. Upon completion, students should be able to apply business concepts to their lives, and describe the six areas of human resource management. This is an elective course.

**HSD 6054. AHS Essentials of Business II. 1.0 Hour.** Class-1500.0. Clinical-0.0. Lab-0.0. Work-0.0

This course is designed to expand on the goals, processes, and business operations explored in Essentials of Business I. Emphasis is placed on the legal and ethical operation of businesses, as well as the importance of team building. Upon completion students should be able to define the legal forms of business ownership, discuss successful business communication, and analyze the impact of technology on business operations. This is an elective course.

**HSD 6066. Oral Communications. 1.0 Hour.** Class-120.0. Clinical-0.0. Lab-0.0. Work-0.0

This course introduces basic oral communication skills. Topics include communication tools that aide with speech delivery. Upon completion, students should be able to evaluate other speakers and assess verbal and non-verbal communication in various settings. This is an elective course.

**HSD 6072. Career Planning. 1.0 Hour.** Class-120.0. Clinical-0.0. Lab-0.0. Work-0.0

This course is designed to help students discover their professional interests and possible careers. Topics include goal setting and how and where to acquire the information and tools necessary for success in college or careers. Upon completion, students should be able to navigate job search engines, write a resume, and develop their interview skills. This is an elective course.

**HSD 6074. AHS Psychology. 1.0 Hour.** Class-120.0. Clinical-0.0. Lab-0.0. Work-0.0

This course introduces various theories of psychology. Topics include a study of methods, biopsychology, cognitive and developmental psychology, and variations in individual and group behavior. Upon completion, students should be able to identify all the domains emphasized by the American Psychological Association (APA). This is an elective course.

**HSD 6075. Games, Puzzles and Problem Solving. 1.0 Hour.**

Class-120.0. Clinical-0.0. Lab-0.0. Work-0.0

This course is designed to help students learn to verbalize a systematic problem solving process and apply the process to different problems. Emphasis is placed on observing and evaluating all available facts to solve problems, using a games and puzzles model. Upon completion, students should be able to identify types of errors people make in solving problems. This is an elective course.

**HSD 6077. Unlocking the Printed Page. 1.0 Hour. Class-120.0.**

Clinical-0.0. Lab-0.0. Work-0.0

This course is designed as a writing intensive course meant to introduce students to the field of journalism. Topics include journalism code of ethics and the different types of journalism such as newspaper, magazine, TV, and radio. Upon completion, students should be able to understand basic aspects of journalistic techniques and assist in the production of a student newsletter. This is an elective course.

**HSD 6078. High School Diploma Creative Writing. 1.0 Hour.**

Class-120.0. Clinical-0.0. Lab-0.0. Work-0.0

This course is designed to offer students the experience of creating their own written works of art from different genres in literature. Topics include writing samples of an autobiography, short story, poetry and playwriting. Upon completion, students should be able to create a portfolio of their works from specific genres for a final grade. This is an elective course.

**HSD 6085. Health. 1.0 Hour. Class-120.0. Clinical-0.0. Lab-0.0. Work-0.0**

This course includes an exploration into health in relation to our bodies, our environment and careers. Topics include mental/emotional health, alcohol and drug use, nutrition, physical activity, and interpersonal relationships. Upon completion, students should be able to develop a respect and appreciation for healthy living.

**HSD 6091. Adult High School Elective One. 1.0 Hour. Class-64.0.**

Clinical-0.0. Lab-0.0. Work-0.0

The following Basic Skills Programs are included under BSP2000: ADULT BASIC EDUCATION (ABE): A program of basic educational skills for adults aged 16 or older who are out of school, who have not graduated from high school, and who function at less than the ninth grade level of competency. GENERAL EDUCATIONAL DEVELOPMENT (GED): A program of instruction designed to prepare adult students to pass the GED test that leads to a High School Diploma Equivalency. ADULT HIGH SCHOOL DIPLOMA (AHS): A program of instruction offered cooperatively with local public school systems to help adult students earn an Adult High School Diploma. COMPENSATORY EDUCATION (CED): A program of instruction providing Basic Education Skills for mentally handicapped Adults. ENGLISH AS A SECOND LANGUAGE (ESL): A program of instruction to help adults who have limited or no proficiency in the English language.

**HSD 6092. Adult High School Elective Two. 1.0 Hour. Class-64.0.**

Clinical-0.0. Lab-0.0. Work-0.0

The following Basic Skills Programs are included under BSP2000: ADULT BASIC EDUCATION (ABE): A program of basic educational skills for adults aged 16 or older who are out of school, who have not graduated from high school, and who function at less than the ninth grade level of competency. GENERAL EDUCATIONAL DEVELOPMENT (GED): A program of instruction designed to prepare adult students to pass the GED test that leads to a High School Diploma Equivalency. ADULT HIGH SCHOOL DIPLOMA (AHS): A program of instruction offered cooperatively with local public school systems to help adult students earn an Adult High School Diploma. COMPENSATORY EDUCATION (CED): A program of instruction providing Basic Education Skills for mentally handicapped Adults. ENGLISH AS A SECOND LANGUAGE (ESL): A program of instruction to help adults who have limited or no proficiency in the English language.

**HSD 6093. Adult High School Elective Three. 1.0 Hour. Class-64.0.**

Clinical-0.0. Lab-0.0. Work-0.0

The following Basic Skills Programs are included under BSP2000: ADULT BASIC EDUCATION (ABE): A program of basic educational skills for adults aged 16 or older who are out of school, who have not graduated from high school, and who function at less than the ninth grade level of competency. GENERAL EDUCATIONAL DEVELOPMENT (GED): A program of instruction designed to prepare adult students to pass the GED test that leads to a High School Diploma Equivalency. ADULT HIGH SCHOOL DIPLOMA (AHS): A program of instruction offered cooperatively with local public school systems to help adult students earn an Adult High School Diploma. COMPENSATORY EDUCATION (CED): A program of instruction providing Basic Education Skills for mentally handicapped Adults. ENGLISH AS A SECOND LANGUAGE (ESL): A program of instruction to help adults who have limited or no proficiency in the English language.

**HSD 6094. Adult High School Elective Four. 1.0 Hour. Class-64.0.**

Clinical-0.0. Lab-0.0. Work-0.0

The following Basic Skills Programs are included under BSP2000: ADULT BASIC EDUCATION (ABE): A program of basic educational skills for adults aged 16 or older who are out of school, who have not graduated from high school, and who function at less than the ninth grade level of competency. GENERAL EDUCATIONAL DEVELOPMENT (GED): A program of instruction designed to prepare adult students to pass the GED test that leads to a High School Diploma Equivalency. ADULT HIGH SCHOOL DIPLOMA (AHS): A program of instruction offered cooperatively with local public school systems to help adult students earn an Adult High School Diploma. COMPENSATORY EDUCATION (CED): A program of instruction providing Basic Education Skills for mentally handicapped Adults. ENGLISH AS A SECOND LANGUAGE (ESL): A program of instruction to help adults who have limited or no proficiency in the English language.

**HSD 6095. Adult High School Elective Five. 1.0 Hour. Class-64.0.**

Clinical-0.0. Lab-0.0. Work-0.0

This course may be used as one elective credit.

**HSD 6096. Adult High School Elective Six. 1.0 Hour. Class-64.0.**

Clinical-0.0. Lab-0.0. Work-0.0

Course may be used for one AHS elective credit.

**HSD 6098. Adult High School Elective Eight. 1.0 Hour. Class-64.0.**

Clinical-0.0. Lab-0.0. Work-0.0

Course represents one AHS elective credit.



**HSD 6099. Adult High School Elective Nine. 1.0 Hour.** Class-64.0.

Clinical-0.0. Lab-0.0. Work-0.0

Course represents one AHS Elective Credit.

## Adult High School Learning Resource (HLR)

**HLR 6001. Adult High School Learning Resource Center. 0.0 Hours.**

Class-120.0. Clinical-0.0. Lab-0.0. Work-0.0

This course provides students with an opportunity to co-enroll in AHS and work towards the completion of a credit using approved software. Topics include various core and elective courses as needed and available per the approved software. Upon completion, students should be able to earn a credit applied towards their Adult High School graduation.

## Math Sense (ABL)

**ABL 6014. Math Sense. 0.0 Hours.** Class-40.0. Clinical-0.0. Lab-0.0.

Work-0.0

This course is designed to prepare students to enter Developmental Mathematics (DMA) courses if they earned a non-passing score on the DMAO10 portion of the NCDAP test. Topics include adding, subtracting, multiplying, and dividing whole numbers, fractions, decimals, and integers as well as solving problems by applying computation skills.

Upon completion of this course, students should be able to compare and perform mathematical operations with whole numbers, fractions, and decimals. Following successful completion of this course (40 hours with a passing grade), students may re-take the NCDAP test to potentially bypass some of the additional DMA courses.

## Bridges Language Arts (BLA) - Pre-High School Equivalency

**BLA 6000. Bridges Language Arts Multi-Level. 0.0 Hours.**

Class-1500.0. Clinical-0.0. Lab-0.0. Work-0.0

This integrated, multi-level course is designed to develop fundamental reading and writing strategies. Emphasis is placed on reading and writing skills using proper punctuation and spelling. Upon completion, students should be able to utilize reading and writing strategies to understand short stories and workplace documents.

**BLA 6003. Bridge Language Arts Intermediate Low. 0.0 Hours.**

Class-1500.0. Clinical-0.0. Lab-0.0. Work-0.0

This course introduces students to reading strategies for understanding short stories and workplace documents. Emphasis is placed on following multi-step procedures, making comparisons, and determining the difference between fact and opinion. Upon completion, students should be able to understand and apply information from short stories and workplace documents.

**BLA 6004. Bridge Language Arts Intermediate High. 0.0 Hours.**

Class-1500.0. Clinical-0.0. Lab-0.0. Work-0.0

This course is designed to develop writing skills and prepare students to integrate and apply information from fictional and non-fictional texts. Emphasis is placed on the introduction of complex themes and elements in literature and the application of reading and writing skills to the workplace. Upon completion, students should be able to write in an organized and cohesive manner with a complex sentence structure and few mechanical errors.

## Bridges Learning Resource (BLR) Center - Pre-High School Equivalency

**BLR 6000. Bridges Learning Resource Center. 0.0 Hours.**

Class-1500.0. Clinical-0.0. Lab-0.0. Work-0.0

This multi-level course provides individualized and small group instruction for students in an open lab setting. Topics include basic mathematical operations, simple algebraic equations, tables, graphs as well as reading comprehension and writing skills using proper punctuation and spelling. Upon completion, students should be prepared to enter the High School Equivalency (HSE) or Adult High School programs. It is a supplement or alternative to BMA or BLA classes. Instruction is customized to the needs of the student.

**BLR 6001. Bridges Learning Resource Center Level 1. 0.0 Hours.**

Class-1500.0. Clinical-0.0. Lab-0.0. Work-0.0

This course provides individualized and small group instruction for students in an open lab. Topics include an introduction to foundational skills in math, reading, and writing in the context of workplace applications. It is a supplement of alternative to beginning BMA or BLA classes.

**BLR 6002. Bridges Learning Resource Center Level 2. 0.0 Hours.**

Class-1500.0. Clinical-0.0. Lab-0.0. Work-0.0

This course provides individualized and small group instruction for students in an open lab setting. Topics include basic math and language arts (reading and writing) in the context of workplace applications. Upon completion, students should be able to move into a higher level BMA or BLA course. It is a supplement or alternative to lower level BMA or BLA classes.

**BLR 6003. Bridges Learning Resource Center Level 3. 0.0 Hours.**

Class-1500.0. Clinical-0.0. Lab-0.0. Work-0.0

This course provides individualized and small group instruction for students in an open lab setting. Topics include operations with whole numbers, decimals, fractions, multi-step procedures, making comparisons, and determining the difference between fact and opinion. Upon completion, students should be able to advance to a higher level BMA or BLA course, enroll directly in high school equivalency, or adult high school classes. It is a supplement or alternative to low intermediate BLA and BMA classes.

**BLR 6004. Bridges Learning Resource Center Level 4. 0.0 Hours.**

Class-1500.0. Clinical-0.0. Lab-0.0. Work-0.0

This course provides individualized and small group instruction for students in an open lab setting. Topics include an introduction to geometry, algebraic concepts, complex themes and elements in literature, and the application of those skills to the workplace. Upon completion, students should be able to enroll in the High School Equivalency (HSE) or Adult High School programs. It is a supplement or alternative to intermediate level math and language arts classes (BLA and BMA).

## Bridges Math (BMA) - Pre-High School Equivalency

**BMA 6000. Bridges Math. 0.0 Hours.** Class-1500.0. Clinical-0.0. Lab-0.0. Work-0.0

This course includes a wide spectrum of mathematical skills. Topics may include operations with whole numbers, fractions, decimals, percentages, pre-algebra, tables, and graphs with workplace applications. Upon completion, students should be able to perform a variety of mathematical calculations in academic and workplace contexts.

**BMA 6003. Bridge Math Intermediate Low. 0.0 Hours.** Class-1500.0. Clinical-0.0. Lab-0.0. Work-0.0

This course includes operations with whole numbers, decimals, and fractions. Emphasis is placed on solving word problems and the application of math skills to the workplace. Upon completion, students should be able to add, subtract, multiply and divide whole numbers, fractions and decimals to solve everyday problems.

**BMA 6004. Bridges Math Intermediate High. 0.0 Hours.** Class-160.0. Clinical-0.0. Lab-0.0. Work-0.0

This course introduces operations with and applications of fractions, decimals, percents, integers. Emphasis is placed on solving real-life problems and applying math skills to the workplace. Upon completion, students should be able to enter the High School Equivalency (HSE) or Adult High School (AHS) programs.

## GED Learning Resource (GLR) Center

**GLR 6000. G E D Learning Resource Ctr Multilvl. 0.0 Hours.**

Class-1500.0. Clinical-0.0. Lab-0.0. Work-0.0

This course offers individualized and small group instruction for students who desire instructional support as they prepare to take the High School Equivalency Test, including the GED and HISET. Emphasis is placed on higher level math, writing, reading, science and social studies skills that are required to earn a high school equivalency diploma. Upon completion, students should be able to demonstrate a deeper understanding of math and language arts fundamentals equivalent to a graduating high school senior. Instruction is customized to each student's needs. To ensure student success, a strict attendance policy is enforced.

## High School Equivalency Community (HCO)

**HCO 6000. High School Equivalency Community Based. 0.0 Hours.**

Class-140.0. Clinical-0.0. Lab-0.0. Work-0.0

This course provides students enrolled at partnering community organizations with an opportunity to prepare for the High School Equivalency Tests. Emphasis is placed on strengthening critical thinking and academic skills through multi-level, multi-subject instruction. Upon completion, students should be able to apply higher level math, reading, writing, social studies and science skills required for passing the High School Equivalency Tests.

## High School Equivalency Distance Learning (HDL)

**HDL 6000. High School Equiv Prep - Hybrid. 0.0 Hours.** Class-120.0. Clinical-0.0. Lab-0.0. Work-0.0

This course is designed to prepare students to pass either the GED or HiSET high school equivalency tests. Topics include higher level math, reading, writing, social studies and science. Upon completion, students should be able to apply critical academic skills to real-life situations and earn a high school equivalency diploma. A customized internet-based instructional program is provided based on each student's assessment results. Students can access the course from any computer with internet.

## High School Equivalency Language Arts (HLA)

**HLA 6000. High School Equiv Prep - Language Arts. 0.0 Hours.**

Class-80.0. Clinical-0.0. Lab-0.0. Work-0.0

This course is designed to prepare students for the High School Equivalency Reading and Writing tests on the GED and HiSET exams. Topics include higher level reading, writing, and grammar equivalent to those of a graduating high school senior. Upon completion, students should be able to apply critical reading skills, write clearly and with purpose, edit, and understand the use of standard written English in context. To ensure student success, strict attendance enforced.

## High School Equivalency Math (HMA)

**HMA 6000. High School Equiv Prep - Mathematics. 0.0 Hours.**

Class-80.0. Clinical-0.0. Lab-0.0. Work-0.0

This course is designed to prepare students to pass the high school equivalency mathematic test on either the GED or HiSET exams. Emphasis is placed on higher level mathematical skills equivalent to those of a graduating high school senior. Upon completion, students should be able to apply a variety of mathematical calculations, including geometry, algebra, and trigonometry, to academic and real-life situations. To ensure student success, a strict attendance policy is enforced.

## High School Equivalency Science (HSI)

**HSI 6000. High School Equivalency Prep. Science. 0.0 Hours.**

Class-80.0. Clinical-0.0. Lab-0.0. Work-0.0

This course is designed to prepare students for the high school equivalency science test. Topics include basic physical science, life science, and earth science. Upon completion, students should be able to demonstrate a deeper understanding of science fundamentals necessary to successfully pass the science portion of the high school equivalency test, including the GED and HISET.

## High School Equivalency Social Studies (HSS)

### **HSS 6000. High School Equiv Prep - Social Studies. 0.0 Hours.**

Class-1500.0. Clinical-0.0. Lab-0.0. Work-0.0

This course is designed to prepare students to pass the high school equivalency social studies test on either the GED or HiSET exams. Topics include history, political science, psychology, sociology, geography and economics. Upon completion, students should be able to demonstrate a deeper understanding of social studies fundamentals equivalent to the knowledge of a graduating high school senior.

## Foundational Education (FED)

### **FED 6113. Foundational Ed Leisure & Humanities. 0.0 Hours.**

Class-1500.0. Clinical-0.0. Lab-0.0. Work-0.0

This course introduces students with a developmental disability or brain injury to leisure activities and humanities. Topics include visual arts appreciation, music appreciation, leisure, dance appreciation, drama/theatre appreciation, sign language, and technology/computer. Upon completion of this course, students will achieve competency on an individual goal based on CASAS competencies chosen from the above topics.

### **FED 6114. Found Educational Community Living. 0.0 Hours.**

Class-1500.0. Clinical-0.0. Lab-0.0. Work-0.0

This course covers a variety of community and life skills topics designed to help students with a developmental disability or brain injury transition to greater self-sufficiency. Topics include geography, American history, civics, community services, home management, money management, and work behavior. Upon completion of this course students will achieve competency on an individual goal based on CASAS competencies chosen from the above topics.

### **FED 6115. Foundational Ed-Functional Academics. 0.0 Hours.**

Class-1500.0. Clinical-0.0. Lab-0.0. Work-0.0

This course helps students with a developmental disability or brain injury to improve their English and math skills. Topics include pre-reading skills, reading skills, functional writing, and math skills. Upon completion of this course, students will achieve competency on an individual goal based on CASAS competencies chosen from the above topics.

### **FED 6116. Foundational Ed - Health and Safety. 0.0 Hours.**

Class-1500.0. Clinical-0.0. Lab-0.0. Work-0.0

This course is designed for students with a developmental disability or brain injury and includes strategies on healthy and safe living. Topics include physical health, mental health, and personal safety. Upon completion of this course, students will achieve competency on an individual goal based on CASAS competencies chosen from the above topics.

## Foundational Community (FCO)

### **FCO 6000. Foundational Community Multilevel. 0.0 Hours.**

Class-1500.0. Clinical-0.0. Lab-0.0. Work-0.0

This course, taught at community locations, introduces students with developmental disabilities or brain injury to a variety of strategies that promote independent living. Topics include reading, writing, leisure, humanities, health, safety, and community living. Upon completion of this course, students will achieve competency on an individual goal based on CASAS competencies chosen from the above topics.

### **FCO 6114. Foundational Comm - Community Living. 0.0 Hours.**

Class-1500.0. Clinical-0.0. Lab-0.0. Work-0.0

This course, taught at community locations, provides students with developmental disabilities or brain injury a variety of strategies to successfully transition to greater self-sufficiency. Topics include budgeting, resume writing, job applications, and transportation. Upon completion of this course, students will achieve competency on an individual goal based on CASAS competencies chosen from the above topics.

## Pathways A+ Certification (PWI)

### **PWI 6000. Pathway to A+ Certification. 0.0 Hours. Class-1500.0.**

Clinical-0.0. Lab-0.0. Work-0.0

This course covers math, communication and critical thinking skills needed for Pathway to A+ credential. Emphasis is placed on math skills and the course content is contextualized to PC PRO COMPTIA+ credential and STEM Career Cluster. Upon completion students should be able to increase math skills needed for PC PRO COMPTI A+ credential. To ensure student success, a strict attendance policy is enforced.

## Pathways Computer Integrated Machining (PWM)

### **PWM 6000. Pathways/Machining. 0.0 Hours. Class-50.0. Clinical-0.0.**

Lab-0.0. Work-0.0

This course covers language arts and math skills customized to the reading, writing and math tasks involved in the Pathway to Computer Integrated Machining Technology Certificate program. Emphasis is placed on the complex math and critical thinking skills encountered by the machining technologist. Upon completion, students should be able to effectively use communication skills and math calculations to perform class-related and job-related tasks involved in Computer Integrated Machining. To ensure student success, a strict attendance policy is enforced.

### **PWM 6000. Pathways/Machining. 0.0 Hours. Class-50.0. Clinical-0.0.**

Lab-0.0. Work-0.0

This course covers language arts and math skills customized to the reading, writing and math tasks involved in the Pathway to Computer Integrated Machining Technology Certificate program. Emphasis is placed on the complex math and critical thinking skills encountered by the machining technologist. Upon completion, students should be able to effectively use communication skills and math calculations to perform class-related and job-related tasks involved in Computer Integrated Machining. To ensure student success, a strict attendance policy is enforced.

## Pathways Developmental Disabilities (PWD)

**PWD 6000. Pathways to Developmental Disabilities. 0.0 Hours.**  
Class-50.0. Clinical-0.0. Lab-0.0. Work-0.0

This course covers language arts instruction customized to the reading and writing tasks involved in the Pathway to Developmental Disabilities Technician certificate program. Emphasis is placed on complex language arts and communication skills that will enable students to comprehend, analyze, synthesize and evaluate academic and work-related tasks. Upon completion, students should be able to effectively complete reading and writing assignments associated with the Developmental Disabilities Technician Certificate program. To ensure student success, a strict attendance policy is enforced.

**PWD 6000. Pathways to Developmental Disabilities. 0.0 Hours.**  
Class-50.0. Clinical-0.0. Lab-0.0. Work-0.0

This course covers language arts instruction customized to the reading and writing tasks involved in the Pathway to Developmental Disabilities Technician certificate program. Emphasis is placed on complex language arts and communication skills that will enable students to comprehend, analyze, synthesize and evaluate academic and work-related tasks. Upon completion, students should be able to effectively complete reading and writing assignments associated with the Developmental Disabilities Technician Certificate program. To ensure student success, a strict attendance policy is enforced.

## Pathways Early Childhood Education (PWE)

**PWE 6000. Pathways Early Childhood Education. 0.0 Hours.**  
Class-50.0. Clinical-0.0. Lab-0.0. Work-0.0

This course covers language arts skills customized to the reading and writing tasks involved in the Pathway to Early Childhood Education certificate program. Emphasis is placed on complex language arts and communication skills that will enable students to comprehend, analyze, synthesize and evaluate academic and work-related assignments. Upon completion, students should be able to effectively apply their reading and writing skills to the content needed to earn a NC Early Childhood Credential. To ensure student success, a strict attendance policy is enforced.

**PWE 6000. Pathways Early Childhood Education. 0.0 Hours.**  
Class-50.0. Clinical-0.0. Lab-0.0. Work-0.0

This course covers language arts skills customized to the reading and writing tasks involved in the Pathway to Early Childhood Education certificate program. Emphasis is placed on complex language arts and communication skills that will enable students to comprehend, analyze, synthesize and evaluate academic and work-related assignments. Upon completion, students should be able to effectively apply their reading and writing skills to the content needed to earn a NC Early Childhood Credential. To ensure student success, a strict attendance policy is enforced.

## Pathways Learning Resource (PLR)

**PLR 6000. Pathways to L R C Multi-Subject. 0.0 Hours.** Class-90.0. Clinical-0.0. Lab-0.0. Work-0.0

This course offers individualized and small group instruction for Pathways to Careers students and provides additional instructional support and tutoring. Emphasis is placed on math and language arts skills contextualized to the content of Pathways to Careers occupational programs. Upon completion, students should be able to effectively complete reading, writing, and math assignments encountered in their occupational classes. To ensure student success, a strict attendance policy is enforced.

## Pathways Office Administration (PWO)

**PWO 6000. Pathways to Basic Office Assistant. 0.0 Hours.** Class-50.0. Clinical-0.0. Lab-0.0. Work-0.0

This course covers academic language arts and math skills customized to the reading, writing, and math tasks involved in the Pathway to Office Administration Specialist certificate. Emphasis is placed on complex language arts and communication skills that will enable students to comprehend, analyze, synthesize and evaluate academic and work-related tasks. Upon completion, students should be able to apply their language and math skills to effectively complete the assignments and duties of an office administration specialist. To ensure student success, a strict attendance policy is enforced.

## Pathways Welding (PWW)

**PWW 6000. Pathways to Welding. 0.0 Hours.** Class-50.0. Clinical-0.0. Lab-0.0. Work-0.0

This course covers language arts and math skills customized to the reading, writing, and math tasks involved in the Pathway to Welding Technology Certificate program. Emphasis is placed on complex math and critical thinking skills encountered by a welding technician. Upon completion, students should be able to effectively use communication skills and math calculations to perform class-related and job-related welding tasks. To ensure student success, a strict attendance policy is enforced.

**PWW 6000. Pathways to Welding. 0.0 Hours.** Class-50.0. Clinical-0.0. Lab-0.0. Work-0.0

This course covers language arts and math skills customized to the reading, writing, and math tasks involved in the Pathway to Welding Technology Certificate program. Emphasis is placed on complex math and critical thinking skills encountered by a welding technician. Upon completion, students should be able to effectively use communication skills and math calculations to perform class-related and job-related welding tasks. To ensure student success, a strict attendance policy is enforced.



## Developmental Courses

### Developmental Mathematics Courses

**DMA 010. Operations With Integers. 1.0 Credit.** Class-0.75. Clinical-0.0. Lab-0.5. Work-0.0

This course provides a conceptual study of integers and integer operations. Topics include integers, absolute value, exponents, square roots, perimeter and area of basic geometric figures, Pythagorean theorem, and use of the correct order of operations. Upon completion, students should be able to demonstrate an understanding of pertinent concepts and principles and apply this knowledge in the evaluation of expressions.

Prerequisites: Take ABL 6014

**DMA 020. Fractions and Decimals. 1.0 Credit.** Class-0.75. Clinical-0.0. Lab-0.5. Work-0.0

This course provides a conceptual study of the relationship between fractions and decimals and covers related problems. Topics include application of operations and solving contextual application problems, including determining the circumference and area of circles with the concept of pi. Upon completion, students should be able to demonstrate an understanding of the connections between fractions and decimals.

Prerequisites: Take DMA 010

**DMA 030. Proportion/Ratios/Rates/Percents. 1.0 Credit.** Class-0.75. Clinical-0.0. Lab-0.5. Work-0.0

This course provides a conceptual study of the problems that are represented by rates, ratios, percent, and proportions. Topics include rates, ratios, percent, proportion, conversion of English and metric units, and applications of the geometry of similar triangles. Upon completion, students should be able to use their understanding to solve conceptual application problems.

Prerequisites: Take All: DMA 010 and DMA 020

**DMA 040. Expressions, Linear Equations, Linear Inequalities. 1.0 Credit.** Class-0.75. Clinical-0.0. Lab-0.5. Work-0.0

This course provides a conceptual study of problems involving linear expressions, equations, and inequalities. Emphasis is placed on solving contextual application problems. Upon completion, students should be able to distinguish between simplifying expressions and solving equations and apply this knowledge to problems involving linear expressions, equations, and inequalities.

Prerequisites: Complete one of the following options:

- DMA 010, DMA 020 and DMA 030
- DMA 025

**DMA 050. Graphs and Equations of Lines. 1.0 Credit.** Class-0.75. Clinical-0.0. Lab-0.5. Work-0.0

This course provides a conceptual study of problems involving graphic and algebraic representations of lines. Topics include slope, equations of lines, interpretation of basic graphs, and linear modeling. Upon completion, students should be able to solve contextual application problems and represent real-world situations as linear equations in two variables.

Prerequisites: Complete one of the following options:

- DMA 010, DMA 020, DMA 030 and DMA 040
- DMA 025 and DMA 040

**DMA 060. Polynomial and Quadratic Applications. 1.0 Credit.**

Class-0.75. Clinical-0.0. Lab-0.5. Work-0.0

This course provides a study of problems involving algebraic representations of quadratic equations. Topics include basic polynomial operations, factoring polynomials, and solving polynomial equations by means of factoring. Upon completion, students should be able to find algebraic solutions to contextual problems with quadratic applications.

Prerequisites: Complete one of the following options:

- DMA 010, DMA 020, DMA 030, DMA 040, and DMA 050
- DMA 010, DMA 020, DMA 030, and DMA 045
- DMA 025, DMA 040, and DMA 050
- DMA 025 and DMA 045

**DMA 070. Rational Expressions and Equations. 1.0 Credit.** Class-0.75.

Clinical-0.0. Lab-0.5. Work-0.0

This course provides a study of problems involving algebraic representations of rational equations. Topics include simplifying and performing operations with rational expressions and equations, understanding the domain, and determining the reasonableness of an answer. Upon completion, students should be able to find algebraic solutions to contextual problems with rational applications.

Prerequisites: Complete one of the following options:

- DMA 010, DMA 020, DMA 030, DMA 040, DMA 050 and DMA 060
- DMA 010, DMA 020, DMA 030, DMA 045 and DMA 060
- DMA 025, DMA 040, DMA 050 and DMA 060
- DMA 025, DMA 045 and DMA 060

**DMA 080. Radical Expressions and Equations. 1.0 Credit.** Class-0.75.

Clinical-0.0. Lab-0.5. Work-0.0

This course provides a study of problems involving algebraic representations of the manipulation of radical expressions and the application of radical equations. Topics include simplifying and performing operations with radical expressions and rational exponents, solving radical equations, and determining the reasonableness of a solution.

Upon completion, students should be able to find algebraic solutions to contextual problems with radical applications.

Prerequisites: Complete one of the following options:

- DMA 010, DMA 020, DMA 030, DMA 040, DMA 050, DMA 060 and DMA 070
- DMA 010, DMA 020, DMA 030, DMA 045, DMA 060, and DMA 070
- DMA 025, DMA 040, DMA 050, DMA 060, AND DMA 070
- DMA 025, DMA 045, DMA 060, AND DMA 070

### Developmental Reading Courses

**DRE 096. Integrated Reading and Writing I. 3.0 Credits.** Class-2.5.

Clinical-0.0. Lab-1.0. Work-0.0

This course is designed to develop proficiency in specific integrated and contextualized reading and writing skills and strategies. Topics include reading and writing processes, critical thinking strategies, and recognition and composition of well-developed, coherent, and unified texts; these topics are primarily taught at the introductory level using texts primarily in a Lexile (TM) range of 960 to 1115. Upon completion, students should be able to apply those skills toward understanding a variety of academic and career-related texts and composing effective paragraphs. Please note: (TM) stands for registered trademark.

**DRE 097. Integrated Reading and Writing II. 3.0 Credits.** Class-2.5. Clinical-0.0. Lab-1.0. Work-0.0

This course is designed to develop proficiency in integrated and contextualized reading and writing skills and strategies. Topics include reading and writing processes, critical thinking strategies, and recognition and composition of well-developed, coherent, and unified texts; except where noted, these topics are taught at a reinforcement level using texts primarily in a Lexile (TM) range of 1070 to 1220. Upon completion, students should be able to demonstrate and apply those skills toward understanding a variety of complex academic and career texts and composing essays incorporating relevant, valid evidence. Please note: (TM) represents registered trademark.  
Prerequisites: TAKE DRE 096

**DRE 098. Integrated Reading and Writing III. 3.0 Credits.** Class-2.5. Clinical-0.0. Lab-1.0. Work-0.0

This course is designed to develop proficiency in integrated and contextualized reading and writing skills and strategies. Topics include reading and writing processes, critical thinking strategies, and recognition and composition of well-developed, coherent, and unified texts; these topics are taught using texts primarily in the Lexile (TM) range of 1185 to 1385. Upon completion, students should be able to apply those skills toward understanding a variety of texts at the career and college ready level and toward composing a documented essay. Note: (TM) represents registered trademark.  
Prerequisites: TAKE DRE 097

## Developmental ACA Academic Related Courses

**ACA 090. Student Success Strategies. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course is intended to provide students with skills and strategies to promote success in college, career, and life. Topics include the College's physical, academic, and social environment, promotes personal development, and cultivates learning strategies essential for student success. Upon completion, students should be able to manage their learning experiences to meet educational and life goals.

## Developmental Chemistry Course

**CHM 090. Chemistry Concepts. 4.0 Credits.** Class-4.0. Clinical-0.0. Lab-0.0. Work-0.0

This course provides a non-laboratory based introduction to basic concepts of chemistry. Topics include measurements, matter, energy, atomic theory, bonding, molecular structure, nomenclature, balancing equations, stoichiometry, solutions, acids and bases, gases, and basic organic chemistry. Upon completion, students should be able to understand and apply basic chemical concepts necessary for success in college-level science courses.

## Developmental Computer Information Technology Course

**CTS 060. Essential Computer Usage. 2.0 Credits.** Class-1.0. Clinical-0.0. Lab-2.0. Work-0.0

This course covers the basic functions and operations of the computer. Topics include identification of components, overview of operating systems, and other basic computer operations. Upon completion, students should be able to perform basic computer commands, access files, print documents and complete fundamental application operations.

## Developmental English as a Foreign Language Courses

**EFL 050. English for Academic Purp. 5.0 Credits.** Class-5.0. Clinical-0.0. Lab-0.0. Work-0.0

This course will provide instruction in academic and professional language skills for non-native speakers of English. Emphasis is placed on development of integrated language skills for use in studying a particular content area. Upon completion, students will demonstrate improved academic language, content-specific vocabulary and skills, and cultural knowledge in the topic area.

**EFL 055. English for Special Purpo. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course will provide instruction in academic and professional language for non-native speakers of English. Emphasis is placed on development of integrated language use for carrying out a specific academic task. Upon completion, students should be able to demonstrate improved language skills for participation and success within the particular topic area.

**EFL 061. Listening/Speaking I. 5.0 Credits.** Class-5.0. Clinical-0.0. Lab-0.0. Work-0.0

This course is designed to provide the basic oral/aural language skills needed for essential daily conversation on campus and in the community. Emphasis is placed on vocabulary building, communication in various social and academic situations, and various spoken grammatical skills. Upon completion, students should be able to produce and understand English dealing with routine topics using basic syntax and vocabulary skills.

**EFL 062. Listening/Speaking II. 5.0 Credits.** Class-5.0. Clinical-0.0. Lab-0.0. Work-0.0

This course is designed to enhance intermediate listening and speaking skills of non-native speakers of English. Emphasis is placed on the ability to hold extended conversation and on the ability to understand extended spoken discourse. Upon completion, students should be able to demonstrate improved listening skills and strategies in a variety of settings.

Prerequisites: Take EFL 061 Minimum grade C

**EFL 063. Listening/Speaking III. 5.0 Credits.** Class-5.0. Clinical-0.0. Lab-0.0. Work-0.0

This course is designed to increase the ability and confidence of high intermediate-level non-native speakers of English in verbal expression and listening comprehension. Emphasis is placed on listening/speaking skills which would be appropriate for group discussions, oral presentations, and note taking. Upon completion, students should be able to successfully participate in high intermediate-level listening and speaking activities.

Prerequisites: Take EFL 062 Minimum grade C

**EFL 064. Listening-Speaking IV. 5.0 Credits.** Class-5.0. Clinical-0.0. Lab-0.0. Work-0.0

This course is designed to prepare advanced-level non-native speakers of English for academic and professional speaking and listening activities. Emphasis is placed on learning and practicing strategies of effective oral expression and comprehension of spoken discourse in informal and formal settings. Upon completion, students should be able to effectively participate in activities appropriate to academic and professional settings.

Prerequisites: Take EFL 063 Minimum grade C

**EFL 071. Reading I. 5.0 Credits.** Class-5.0. Clinical-0.0. Lab-0.0. Work-0.0

This course is designed to help those literacy skills achieve reading fluency in English at the beginning level. Emphasis is placed on basic academic and cultural vocabulary and reading strategies which include self-monitoring, and recognizing organizational styles and context clues. Upon completion, students should be able to use these strategies to read and comprehend basic academic, narrative, and expository texts. This course is intended for non-native speakers of English.

**EFL 072. Reading II. 5.0 Credits.** Class-5.0. Clinical-0.0. Lab-0.0. Work-0.0

This course provides preparation in academic and general purpose reading in order to achieve reading fluency at the low-intermediate level. Emphasis is placed on expanding academic and cultural vocabulary and developing effective reading strategies to improve comprehension and speed. Upon completion, students should be able to read and comprehend narrative and expository texts at the low-intermediate instructional level. This course is intended for non-native speakers of English. Prerequisites: Take EFL 071 Minimum grade C

**EFL 073. Reading III. 5.0 Credits.** Class-5.0. Clinical-0.0. Lab-0.0. Work-0.0

This course is designed to develop fundamental reading and study strategies at the intermediate level needed for curriculum programs. Emphasis is placed on building vocabulary and cultural knowledge, improving comprehension, and developing study strategies on basic-level college materials and literary works. Upon completion, students should be able to read and comprehend narrative and expository texts at the intermediate instructional level. This course is intended for non-native speakers of English. Prerequisites: Take EFL 072 Minimum grade C

**EFL 074. Reading IV. 5.0 Credits.** Class-5.0. Clinical-0.0. Lab-0.0. Work-0.0

This course is designed to enhance the academic reading skills for successful reading ability as required in college-level courses. Emphasis is placed on strategies for effective reading and the utilization of these strategies to improve comprehension, analytical skills, recall, and overall reading speed. Upon completion, students should be able to comprehend, synthesize, and critique multi-disciplinary college-level reading/textbook materials. This course is intended for non-native speakers of English. Prerequisites: Take EFL 073 Minimum grade C

**EFL 081. Grammar I. 5.0 Credits.** Class-5.0. Clinical-0.0. Lab-0.0. Work-0.0

This course provides non-native speakers of English with a variety of fundamental grammatical concepts which enrich language skills and comprehension. Emphasis is on key basic grammatical structures and opportunities for practice which incorporate grammatical knowledge into various skills areas. Upon completion, students should be able to demonstrate comprehension and correct usage of specified grammatical concepts.

**EFL 082. Grammar II. 5.0 Credits.** Class-5.0. Clinical-0.0. Lab-0.0. Work-0.0

This course provides non-native speakers of English with a variety of basic grammatical concepts which enrich language skills and comprehension. Emphasis is on key low-intermediate grammatical structures and opportunities for practice which incorporate grammatical knowledge into various skills areas. Upon completion, students should be able to demonstrate by written and oral means the comprehension and correct usage of specified grammatical concepts. Prerequisites: Take EFL 081 Minimum grade C

**EFL 083. Grammar III. 5.0 Credits.** Class-5.0. Clinical-0.0. Lab-0.0. Work-0.0

This course is designed to provide high-intermediate non-native speakers of English with a knowledge of grammatical structures that improves academic communication. Emphasis is placed on using high-intermediate grammatical structures in meaningful contexts through exercises integrating the use of newly acquired structures with previously learned structures. Upon completion, students should be able to demonstrate improved proficiency, comprehension, and grammatical accuracy. Prerequisites: Take EFL 082 Minimum grade C

**EFL 084. Grammar IV. 5.0 Credits.** Class-5.0. Clinical-0.0. Lab-0.0. Work-0.0

This course is designed to give non-native speakers of English a full understanding of advanced grammatical structures and techniques. Emphasis is placed on oral and written communicative fluency through the study of advanced grammatical forms. Upon completion, students should be able to incorporate the structures covered in both spoken and written form, demonstrating improved proficiency, comprehension, and grammatical accuracy. Prerequisites: Take EFL 083 Minimum grade C

**EFL 091. Composition I. 5.0 Credits.** Class-5.0. Clinical-0.0. Lab-0.0. Work-0.0

This course introduces basic sentence structure and writing paragraphs. Emphasis is placed on word order, verb tense-aspect system, auxiliaries, word forms, and simple organization and basic transitions in writing paragraphs. Upon completion, students should be able to demonstrate a basic understanding of grammar and ability to write English paragraphs using appropriate vocabulary, organization, and transitions. This course is intended for non-native speakers of English.

**EFL 092. Composition II. 5.0 Credits.** Class-5.0. Clinical-0.0. Lab-0.0. Work-0.0

This course provides preparation in low-intermediate academic and general-purpose writing. Emphasis is placed on writing as a process, paragraph development, and basic essay organization. Upon completion, students should be able to write and independently edit and use the major elements of the writing process, sentence, paragraph, and essay. This course is intended for non-native speakers of English. Prerequisites: Take EFL 091 Minimum grade C

**EFL 093. Composition III. 5.0 Credits.** Class-5.0. Clinical-0.0. Lab-0.0. Work-0.0

This course covers intermediate-level academic and general-purpose writing. Emphasis is placed on the writing process, content, organization, and language use in formal academic compositions in differing rhetorical modes. Upon completion, students should be able to effectively use the writing process in a variety of rhetorical modes. This course is intended for non-native speakers of English. Prerequisites: Take EFL 092 Minimum grade C

**EFL 094. Composition IV. 5.0 Credits.** Class-5.0. Clinical-0.0. Lab-0.0. Work-0.0

This course prepares low-advanced non-native speakers of English to determine the purpose of their writing and to write paragraphs and essays to fulfill that purpose. Emphasis is placed on unity, coherence, completeness, audience, the writing process, and the grammatical forms and punctuation appropriate for each kind of writing. Upon completion, students should be able to write unified, coherent, and complete paragraphs and essays which are grammatical and appropriate for the intended audience. This course is intended for non-native speakers of English. Prerequisites: Take EFL 093 Minimum grade C

**EFL 095. Composition V. 5.0 Credits.** Class-5.0. Clinical-0.0. Lab-0.0. Work-0.0

This course is designed to prepare advanced non-native speakers of English for college-level composition courses. Emphasis is placed on the study and process of writing formal essays and research papers and the analysis of literary, expository, and descriptive writings. Upon completion, students should be able to write and analyze professional and peer compositions and apply basic research principles. This course is intended for non-native speakers of English.

Prerequisites: Take EFL 094

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## Academic Related (ACA)

**ACA 111. College Student Success. 1.0 Credit.** Class-1.0. Clinical-0.0. Lab-0.0. Work-0.0

This course introduces the college's physical, academic, and social environment and promotes the personal development essential for success. Topics include campus facilities and resources; policies, procedures, and programs; study skills; and life management issues such as health, self-esteem, motivation, goal-setting, diversity, and communication. Upon completion, students should be able to function effectively within the college environment to meet their educational objectives.

**ACA 118. College Study Skills. 2.0 Credits.** Class-1.0. Clinical-0.0. Lab-2.0. Work-0.0

This course covers skills and strategies designed to improve study behaviors. Topics include time management, note taking, test taking, memory techniques, active reading strategies, critical thinking, communication skills, learning styles, and other strategies for effective learning. Upon completion, students should be able to apply appropriate study strategies and techniques to the development of an effective study plan. This course is also available through the Virtual Learning Community.

**ACA 120. Career Assessment. 1.0 Credit.** Class-1.0. Clinical-0.0. Lab-0.0. Work-0.0

This course provides the information and strategies necessary to develop clear personal, academic, and professional goals. Topics include personality styles, goal setting, various college curricula, career choices, and campus leadership development. Upon completion, students should be able to clearly state their personal, academic, and professional goals and have a feasible plan of action to achieve those goals. This course is also available through the Virtual Learning Community.

**ACA 122. College Transfer Success. 1.0 Credit.** Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0

This course provides information and strategies necessary to develop clear academic and professional goals beyond the community college experience. Topics include the CAA, college policies and culture, career exploration, gathering information on senior institutions, strategic planning, critical thinking, and communications skills for a successful academic transition. Upon completion, students should be able to develop an academic plan to transition successfully to senior institutions.

## Accounting (ACC)

**ACC 110. Ten-Key Skills. 1.0 Credit.** Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0

This course is designed to enable mastery of the "touch system" on the ten-key device. Emphasis is placed on the "touch system" on the ten-key device. Upon completion, students should be able to use the "touch system" on a ten-key device in making computations necessary in accounting.

**ACC 115. College Accounting. 4.0 Credits.** Class-3.0. Clinical-0.0. Lab-2.0. Work-0.0

This course introduces basic accounting principles for a business. Topics include the complete accounting cycle with end-of-period statements, bank reconciliation, payrolls, and petty cash. Upon completion, students should be able to demonstrate an understanding of accounting principles and apply those skills to a business organization. This course is intended for those who have not received credit for ACC 120.

Prerequisites: Take DMA 050 MAT 121 MAT 122 MAT 143 MAT 152 MAT 171 MAT 172 MAT 263 MAT 271 MAT 272 MAT 273 or MAT 285 Minimum grade C

Take EFL 112 ENG 111 ENG 112 ENG 113 or ENG 114 Minimum grade C

**ACC 120. Principles of Financial Accounting. 4.0 Credits.** Class-3.0. Clinical-0.0. Lab-2.0. Work-0.0

This course introduces business decision-making using accounting information systems. Emphasis is placed on analyzing, summarizing, reporting, and interpreting financial information. Upon completion, students should be able to prepare financial statements, understand the role of financial information in decision-making and address ethical considerations. This course is intended for students who have not received credit for ACC-115.

Prerequisites: Take DMA 050 MAT 121 MAT 122 MAT 143 MAT 152 MAT 171 MAT 172 MAT 263 MAT 271 MAT 272 MAT 273 or MAT 285 Minimum grade C Take DRE 098 or ENG 111 with a minimum grade of C

**ACC 121. Principles of Managerial Accounting. 4.0 Credits.** Class-3.0. Clinical-0.0. Lab-2.0. Work-0.0

This course includes a greater emphasis on managerial and cost accounting skills. Emphasis is placed on managerial accounting concepts for external and internal analysis, reporting and decision-making. Upon completion, students should be able to analyze and interpret transactions relating to managerial concepts including product-costing systems.

Prerequisites: Take ACC 120 Minimum grade C

**ACC 129. Individual Income Taxes. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0

This course introduces the relevant laws governing individual income taxation. Topics include tax law, electronic research and methodologies, and the use of technology for preparation of individual income tax returns. Upon completion, students should be able to analyze basic tax scenarios, research applicable tax law, and complete various individual tax forms.

Prerequisites: Take ACC 120 Minimum grade C

**ACC 130. Business Income Taxes. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0

This course introduces the relevant laws governing business and fiduciary income taxes. Topics include tax law relating to business organizations, electronic research and methodologies, and the use of technology for the preparation of business tax returns. Upon completion, students should be able to analyze basic tax scenarios, research applicable tax law, and complete various business tax forms.

Prerequisites: Take ACC 129 Minimum grade C

**ACC 140. Payroll Accounting. 2.0 Credits.** Class-1.0. Clinical-0.0. Lab-3.0. Work-0.0

This course covers federal and state laws pertaining to wages, payroll taxes, payroll tax forms, and journal and general ledger transactions. Emphasis is placed on computing wages; calculating social security, income, and unemployment taxes; preparing appropriate payroll tax forms; and journalizing/posting transactions. Upon completion, students should be able to analyze data, make appropriate computations, complete forms, and prepare accounting entries using appropriate technology.

Prerequisites: Take One: ACC 115 or ACC 120

**ACC 149. Introduction to Accounting Spreadsheets. 2.0 Credits.** Class-1.0. Clinical-0.0. Lab-3.0. Work-0.0

This course provides a working knowledge of computer spreadsheets and their use in accounting. Topics include pre-programmed problems, model-building problems, beginning-level macros, graphics, and what-if analysis enhancements of template problems. Upon completion, students should be able to use a computer spreadsheet to complete many of the tasks required in accounting.

Prerequisites: Take ACC 115 or ACC 120

Take CIS 110

**ACC 150. Accounting Software Applications. 2.0 Credits.** Class-1.0. Clinical-0.0. Lab-3.0. Work-0.0

This course introduces microcomputer applications related to accounting systems. Topics include general ledger, accounts receivable, accounts payable, inventory, payroll, and correcting, adjusting, and closing entries. Upon completion, students should be able to use a computer accounting package to accurately solve accounting problems.

Prerequisites: Take One: ACC 115 or ACC 120

**ACC 210. Enterprise Risk Management. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course introduces enterprise risk management as it applies to accounting and finance. Topics include risk recognition, assessment, risk analysis, internal controls, and risk management plans. Upon completion, students should be able to demonstrate the daily managerial and organizational requirements of enterprise risk management in written and oral format.

Prerequisites: Take ACC 120

**ACC 220. Intermediate Accounting I. 4.0 Credits.** Class-3.0. Clinical-0.0. Lab-2.0. Work-0.0

This course is a continuation of the study of accounting principles with in-depth coverage of theoretical concepts and financial statements. Topics include generally accepted accounting principles and extensive analysis of balance sheet components. Upon completion, students should be able to demonstrate competence in the conceptual framework underlying financial accounting, including the application of financial standards.

Prerequisites: Take ACC 120 and ACC 121

**ACC 221. Intermediate Accounting II. 4.0 Credits.** Class-3.0. Clinical-0.0. Lab-2.0. Work-0.0

This course is a continuation of ACC 220. Emphasis is placed on special problems which may include leases, bonds, investments, ratio analyses, present value applications, accounting changes, and corrections. Upon completion, students should be able to demonstrate an understanding of the principles involved and display an analytical problem-solving ability for the topics covered.

Prerequisites: Take ACC 220 Minimum grade C

**ACC 225. Cost Accounting. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course introduces the nature and purposes of cost accounting as an information system for planning and control. Topics include direct materials, direct labor, factory overhead, process, job order, and standard cost systems. Upon completion, students should be able to demonstrate an understanding of the principles involved and display an analytical problem-solving ability for the topics covered.

Prerequisites: Take ACC 121 Minimum grade C

**ACC 240. Gov & Not-For-Profit Acct. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course introduces principles and procedures applicable to governmental and not-for-profit organizations. Emphasis is placed on various budgetary accounting procedures and fund accounting. Upon completion, students should be able to demonstrate an understanding of the principles involved and display an analytical problem-solving ability for the topics covered.

Prerequisites: Take ACC 121 Minimum grade C

**ACC 250. Advanced Accounting. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course is designed to analyze the special accounting issues, which may include business combinations, partnerships, international accounting, estates, and trusts. Emphasis is placed on analyzing transactions and preparing working papers and financial statements. Upon completion, students should be able to solve a wide variety of problems by advanced application of accounting principles and procedures.

Prerequisites: Take ACC 220 Minimum grade C

**ACC 269. Auditing & Assurance Services. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course introduces selected topics pertaining to the objectives, theory and practices in engagements providing auditing and other assurance services. Topics include planning, conducting and reporting, with emphasis on the related professional ethics and standards. Upon completion, students should be able to demonstrate an understanding of the types of professional services, the related professional standards, and engagement methodology.

Prerequisites: Take ACC 220 Minimum grade C

**ACC 270. International Accounting. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course includes identifying, recording, and interpreting financial information for accounting systems used in different countries. Topics include currency exchange rates, methods of setting and selecting transfer prices, practices used to account for rates of inflation, and major types of taxes. Upon completion, students should be able to describe accounting systems and their impacts on different currencies and demonstrate a basic knowledge of international accounting. This course is a unique concentration requirement in the international business concentration in the business administration program.

Prerequisites: Take ACC 120

## Agriculture (AGR)

**AGR 121. Biological Pest Management. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course will emphasize the building and maintaining of healthy soil, plant and insect biological cycles as the key to pest and disease management. Course content includes study of major pests and diseases, including structure, life cycle, and favored hosts; and biological and least toxic methods of chemical control. Upon completion, students will be able to identify and recommend methods of prevention and control of selected insects and diseases.

**AGR 140. Agricultural Chemicals. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0

This course covers all aspects of agricultural chemicals. Topics include safety, environmental effects, federal and state laws, pesticide classification, sprayer calibration, and licensing. Upon completion, students should be able to calibrate a sprayer, give proper pesticide recommendations (using integrated pest management), and demonstrate safe handling of pesticides.

## Air Cond, Heating, and Refrig (AHR)

**AHR 110. Introduction to Refrigeration. 5.0 Credits.** Class-2.0. Clinical-0.0. Lab-6.0. Work-0.0

This course introduces the basic refrigeration process used in mechanical refrigeration and air conditioning systems. Topics include terminology, safety, and identification and function of components; refrigeration cycle; and tools and instrumentation used in mechanical refrigeration systems. Upon completion, students should be able to identify refrigeration systems and components, explain the refrigeration process, and use the tools and instrumentation of the trade.

**AHR 111. HVACR Electricity. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0

This course introduces electricity as it applies to HVACR equipment. Emphasis is placed on power sources, interaction of electrical components, wiring of simple circuits, and the use of electrical test equipment. Upon completion, students should be able to demonstrate good wiring practices and the ability to read simple wiring diagrams.

**AHR 112. Heating Technology. 4.0 Credits.** Class-2.0. Clinical-0.0. Lab-4.0. Work-0.0

This course covers the fundamentals of heating including oil, gas, and electric heating systems. Topics include safety, tools and instrumentation, system operating characteristics, installation techniques, efficiency testing, electrical power, and control systems. Upon completion, students should be able to explain the basic oil, gas, and electrical heating systems and describe the major components of a heating system.

**AHR 113. Comfort Cooling. 4.0 Credits.** Class-2.0. Clinical-0.0. Lab-4.0. Work-0.0

This course covers the installation procedures, system operations, and maintenance of residential and light commercial comfort cooling systems. Topics include terminology, component operation, and testing and repair of equipment used to control and produce assured comfort levels. Upon completion, students should be able to use psychrometrics, manufacturer specifications, and test instruments to determine proper system operation.

**AHR 114. Heat Pump Technology. 4.0 Credits.** Class-2.0. Clinical-0.0. Lab-4.0. Work-0.0

This course covers the principles of air source and water source heat pumps. Emphasis is placed on safety, modes of operation, defrost systems, refrigerant charging, and system performance. Upon completion, students should be able to understand and analyze system performance and perform routine service procedures.

Prerequisites: Take One: AHR 110 or AHR 113

**AHR 115. Refrigeration Systems. 2.0 Credits.** Class-1.0. Clinical-0.0. Lab-3.0. Work-0.0

This course introduces refrigeration systems and applications. Topics include defrost methods, safety and operational control, refrigerant piping, refrigerant recovery and charging, and leak testing. Upon completion, students should be able to assist in installing and testing refrigeration systems and perform simple repairs.

Prerequisites: Take AHR 110

**AHR 125. HVACR Electronics. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0

This course introduces the common electronic control components in HVACR systems. Emphasis is placed on identifying electronic components and their functions in HVACR systems and motor-driven control circuits. Upon completion, students should be able to identify components, describe control circuitry and functions, and use test instruments to measure electronic circuit values and identify malfunctions.  
Prerequisites: Take One: AHR 111, ELC 111, or ELC 112

**AHR 130. HVAC Controls. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0

This course covers the types of controls found in residential and commercial comfort systems. Topics include electrical and electronic controls, control schematics and diagrams, test instruments, and analysis and troubleshooting of electrical systems. Upon completion, students should be able to diagnose and repair common residential and commercial comfort system controls. This course covers the types of controls found in residential and commercial comfort systems. Topics include electrical and electronic controls schematics and diagrams, test instruments, and analysis and troubleshooting of electrical systems. Upon completion, students should be able to diagnose and repair common residential and commercial comfort system controls.  
Prerequisites: Take One: AHR 111, ELC 111, or ELC 112

**AHR 140. All-Weather Systems. 2.0 Credits.** Class-1.0. Clinical-0.0. Lab-3.0. Work-0.0

This course covers the principles of combination heating and cooling systems including gas-electric, all-electric, and oil-electric systems. Topics include PTAC's and package and split-system units. Upon completion, students should be able to understand systems performance and perform routine maintenance procedures.  
Prerequisites: Take One: AHR 112 or AHR 113

**AHR 151. HVAC Duct Systems I. 2.0 Credits.** Class-1.0. Clinical-0.0. Lab-3.0. Work-0.0

This course introduces the techniques used to lay out and fabricate duct work commonly found in HVAC systems. Emphasis is placed on the skills required to fabricate duct work. Upon completion, students should be able to lay out and fabricate simple duct work.

**AHR 160. Refrigerant Certification. 1.0 Credit.** Class-1.0. Clinical-0.0. Lab-0.0. Work-0.0

This course covers the requirements for the EPA certification examinations. Topics include small appliances, high pressure systems, and low pressure systems. Upon completion, students should be able to demonstrate knowledge of refrigerants and be prepared for the EPA certification examinations.

**AHR 180. HVACR Customer Relations. 1.0 Credit.** Class-1.0. Clinical-0.0. Lab-0.0. Work-0.0

This course introduces common business and customer relation practices that may be encountered in HVACR. Topics include business practices, appearance of self and vehicle, ways of handling customer complaints, invoices, telephone communications, and warranties. Upon completion, students should be able to present themselves to customers in a professional manner, understand how the business operates, complete invoices, and handle complaints.

**AHR 211. Residential System Design. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0

This course introduces the principles and concepts of conventional residential heating and cooling system design. Topics include heating and cooling load estimating, basic psychrometrics, equipment selection, duct system selection, and system design. Upon completion, students should be able to design a basic residential heating and cooling system.

**AHR 212. Advanced Comfort Systems. 4.0 Credits.** Class-2.0. Clinical-0.0. Lab-6.0. Work-0.0

This course covers water-cooled comfort systems, water-source/geothermal heat pumps, and high efficiency heat pump systems including variable speed drives and controls. Emphasis is placed on the application, installation, and servicing of water-source systems and the mechanical and electronic control components of advanced comfort systems. Upon completion, students should be able to test, analyze, and troubleshoot water-cooled comfort systems, water-source/geothermal heat pumps, and high efficiency heat pumps.  
Prerequisites: Take AHR 114

**AHR 213. HVACR Building Code. 2.0 Credits.** Class-1.0. Clinical-0.0. Lab-2.0. Work-0.0

This course covers the North Carolina codes that are applicable to the design and installation of HVACR systems. Topics include current North Carolina codes as applied to HVACR design, service, and installation. Upon completion, students should be able to demonstrate the correct usage of North Carolina codes that apply to specific areas of the HVACR trade.

**AHR 215. Commercial HVAC Controls. 2.0 Credits.** Class-1.0. Clinical-0.0. Lab-3.0. Work-0.0

This course introduces HVAC control systems used in commercial applications. Topics include electric/electronic control systems, pneumatic control systems, DDC temperature sensors, humidity sensors, pressure sensors, wiring, controllers, actuators, and controlled devices. Upon completion, students should be able to verify or correct the performance of common control systems with regard to sequence of operation and safety.  
Prerequisites: Take One: AHR 111, ELC 111, or ELC 112

**AHR 225. Commercial System Design. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0

This course covers the principles of designing heating and cooling systems for commercial buildings. Emphasis is placed on commercial heat loss/gain calculations, applied psychrometrics, air-flow calculations, air distribution system design, and equipment selection. Upon completion, students should be able to calculate heat loss/gain, design and size air and water distribution systems, and select equipment.

**AHR 235. Refrigeration Design. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0

This course covers the principles of commercial refrigeration system operation and design. Topics include walk-in coolers, walk-in freezers, system components, load calculations, equipment selection, defrost systems, refrigerant line sizing, and electric controls. Upon completion, students should be able to design, adjust, and perform routine service procedures on a commercial refrigeration system.  
Prerequisites: Take AHR 110



**AHR 240. Hydronic Heating. 2.0 Credits.** Class-1.0. Clinical-0.0. Lab-3.0. Work-0.0

This course covers the accepted procedures for proper design, installation, and balance of hydronic heating systems for residential or commercial buildings. Topics include heating equipment; pump, terminal unit, and accessory selection; piping system selection and design; and pipe sizing and troubleshooting. Upon completion, students should be able to assist with the proper design, installation, and balance of typical hydronic systems.

Prerequisites: Take AHR 112

**AHR 245. Chiller Systems. 2.0 Credits.** Class-1.0. Clinical-0.0. Lab-3.0. Work-0.0

This course introduces the fundamentals of liquid chilling equipment. Topics include characteristics of water, principles of water chilling, the chiller, the refrigerant, water and piping circuits, freeze prevention, purging, and equipment flexibility. Upon completion, students should be able to describe the components, controls, and overall operation of liquid chilling equipment and perform basic maintenance tasks.

Prerequisites: Take AHR 110

**AHR 255. Indoor Air Quality. 2.0 Credits.** Class-1.0. Clinical-0.0. Lab-2.0. Work-0.0

This course introduces the techniques of assessing and maintaining the quality of the indoor environment in residential and commercial structures. Topics include handling and investigating complaints, filter selection, humidity control, testing for sources of carbon monoxide, impact of mechanical ventilation, and building and duct pressures. Upon completion, students should be able to assist in investigating and solving common indoor air quality problems.

**AHR 263. Energy Management. 2.0 Credits.** Class-1.0. Clinical-0.0. Lab-3.0. Work-0.0

This course covers building automation computer programming as currently used in energy management. Topics include night setback, duty cycling, synchronization, schedule optimization, and anticipatory temperature control. Upon completion, students should be able to write programs utilizing the above topics and connect computer systems to HVAC systems.

Prerequisites: Take One: AHR 125 or AHR 215

## Alternative Energy Technology (ALT)

**ALT 110. Biofuels I. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course is designed to provide an introduction to the fundamentals of biobased fuels. Emphasis is placed on proper handling and use guidelines, basic chemistry of biofuels, production methods, and the social, environmental, and economic impacts of biofuels. Upon completion, students should be able to demonstrate a general understanding of biofuels.

**ALT 120. Renewable Energy Technologies. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0

This course provides an introduction to multiple technologies that allow for the production and conservation of energy from renewable sources. Topics include hydro-electric, wind power, passive and active solar energy, tidal energy, appropriate building techniques, and energy conservation methods. Upon completion, students should be able to demonstrate an understanding of renewable energy production and its impact on humans and their environment.

**ALT 250. Thermal Systems. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0

This course introduces concepts, tools, techniques, and materials used to convert thermal energy into a viable, renewable energy resource. Topics include forced convection, heat flow and exchange, radiation, the various elements of thermal system design, regulations, and system installation and maintenance. Upon completion, students should be able to demonstrate an understanding of geothermal and solar thermal systems and corresponding regulations.

## American Sign Language (ASL)

**ASL 110. Visual Gestural Communication. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course introduces the comprehension and expression of visual-gestural aspects of non-verbal communication in American Sign Language. Emphasis is placed on hand shapes, facial expression, pantomime and body language with activities that create visual, motor and cognitive readiness for signed languages. Upon completion, students should be able to demonstrate improved visual gestural communication and comprehension of facial expressions, body language and use of space.

**ASL 111. Elementary ASL I. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course introduces the fundamental elements of American Sign Language within a cultural context. Emphasis is placed on the development of basic expressive and receptive skills. Upon completion, students will be able to comprehend and respond with grammatical accuracy to expressive American Sign Language and demonstrate cultural awareness.

Corequisites: Take ASL 181

**ASL 112. Elementary ASL II. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course is a continuation of ASL 111 focusing on the fundamental elements of American Sign Language in a cultural context. Emphasis is placed on the progressive development of expressive and receptive skills. Upon completion, the students should be able to comprehend and respond with increasing accuracy to expressive American Sign Language and demonstrate cultural awareness.

Prerequisites: Take ASL 111 Minimum grade C

Corequisites: Take ASL 182

**ASL 120. ASL for the Workplace. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course offers applied American Sign Language (ASL) for the workplace to facilitate basic communication with people whose native language is ASL. Emphasis is placed on expressive and receptive communication and career-specific vocabulary that targets health, business, and/or public service professions. Upon completion, students should be able to communicate at a functional level with native speakers and to demonstrate cultural sensitivity.

**ASL 151. Numbers and Fingerspelling. 1.0 Credit.** Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0

This course provides an in-depth study of number systems and fingerspelling techniques in ASL. Emphasis is placed on generating and receiving numbers and fingerspelling in context. Upon completion, students should be able to accurately express and receive numbers and fingerspelling.

Prerequisites: Take ASL 111 Minimum grade C

**ASL 181. ASL Lab 1. 1.0 Credit.** Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0

This course provides an opportunity to enhance acquisition of the fundamental elements of American Sign Language. Emphasis is placed on the progressive development of basic expressive and receptive skills through the use of supplementary learning media and materials. Upon completion, students should be able to comprehend and respond with grammatical accuracy to expressive American Sign Language and demonstrate cultural awareness.

**ASL 182. ASL Lab 2. 1.0 Credit.** Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0

This course provides an opportunity to enhance acquisition of the fundamental elements of American Sign Language. Emphasis is placed on the progressive development of basic expressive and receptive skills through the use of supplementary learning media and materials. Upon completion, students should be able to comprehend and respond with increasing proficiency to expressive American Sign Language and demonstrate cultural awareness.

Prerequisites: Take ASL 181 Minimum grade C

Corequisites: Take ASL 112

**ASL 211. Intermediate ASL I. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course provides a review and expansion of the essential skills of American Sign Language. Emphasis is placed on the progressive development of expressive and receptive skills, study of authentic and representative literacy and cultural texts. Upon completion, students should be able to communicate effectively, accurately, and creatively using American Sign Language about the past, present, and future.

Prerequisites: Take ASL 112 Minimum grade C

Corequisites: Take ASL 281

**ASL 212. Intermediate ASL II. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course provides a continuation of ASL 211. Emphasis is placed on the continuing development of expressive and receptive skills, with study of authentic and representative literary and cultural texts. Upon completion, students should be able to communicate spontaneously and accurately with increasing complexity and sophistication.

Prerequisites: Take ASL 211 Minimum grade C

Corequisites: Take ASL 282

**ASL 221. Advanced American Sign Language I. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course provides an expansion of the essential and advanced skills of ASL, including advanced vocabulary, lexicalized fingerspelling, and complex grammatical structures. Emphasis is placed on the advanced development of expressive, receptive and conversational skills, study of authentic and representative literacy and cultural texts. Upon completion, students will communicate more accurately with advanced complexity, and to present the topics in the various registers, pragmatics and genres of ASL.

Prerequisites: Take ASL 212 Minimum grade C

**ASL 222. Advanced American Sign Language II. 3.0 Credits.**

Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course provides more expansion of the essential and advanced skills of ASL, including advanced vocabulary, lexicalized fingerspelling, story telling, and complex grammatical structures. Emphasis is placed on the more advanced development of expressive, receptive, conversational and presentational skills in a variety of discourse genres. Upon completion, students should be able to debate and lecture with advanced complexity, create story telling, and to present the complementary issues of Deaf community.

Prerequisites: Take ASL 221 Minimum grade C

**ASL 225. Global Deaf Community. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course provides an overview of issues related to D/deaf people focusing on Deaf history, causes of deafness, communication, and attitudes toward D/deaf people globally. Emphasis is placed on deaf history, causes of deafness, communication, and attitude toward D/deaf people. Upon completion, students should be able to discuss significant issues related to deafness.

**ASL 250. Linguistics of American Sign Language. 3.0 Credits.**

Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course is designed to increase knowledge and skills necessary to linguistically analyze ASL. Emphasis is placed on applying phonology, morphology, syntax, semantics, discourse and socio- linguistics of ASL. Upon completion, students should be able to demonstrate knowledge and understanding of the basic linguistics of ASL through a variety of assessment methods.

Prerequisites: Take ASL 212 and IPP 111 with a minimum grade of C Passing ASLPI score

**ASL 252. American Sign Language Classifiers. 1.0 Credit.** Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0

This course provides an opportunity to enhance the use of principles of ASL classifiers and to expand the use of ASL classifiers. Emphasis is placed on using different categories of classifiers including bodypart, descriptive, element, instrument and semantic classifiers. Upon completion, students should be able to communicate effectively, accurately, and creatively incorporating ASL classifiers.

Prerequisites: Take ASL 212 Minimum grade C

**ASL 253. American Sign Language Non-Manual Signals. 1.0 Credit.**

Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0

This course provides an opportunity to enhance and expand the essential skills of ASL's non-manual signals. Emphasis is placed on using different parts of non-manual signals including listener's feedback, ASL mouth morphemes, eye and forehead expressions, and head and shoulder shifts. Upon completion, students should be able to use ASL non-manual signals effectively, accurately and creatively.

Prerequisites: Take ASL 211 Minimum grade C

**ASL 260. American Sign Language Semantics. 3.0 Credits.** Class-3.0.

Clinical-0.0. Lab-0.0. Work-0.0

This course is designed to build upon students' knowledge of ASL semantic skills in an effort to enhance students' use of ASL with semantic clarity and accuracy. Emphasis is placed on analyzing, practicing, and demonstrating skills in using appropriate semantic meaning in ASL discourse with focus on various levels of ASL register. Upon completion, students should be able to demonstrate an understanding of the importance of the role of ASL semantics in the linguistic function of ASL and improvement in conveying accurate meaning in ASL.

Prerequisites: Take ASL 250

**ASL 281. ASL Lab 3. 1.0 Credit.** Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0

This course provides an opportunity to enhance the review and expansion of the essential skills of American Sign Language. Emphasis is placed on the progressive development of expressive and receptive skills through the study of authentic and representative literary and cultural texts through the use of various supplementary learning media and materials. Upon completion, students should be able to communicate effectively, accurately, and creatively about the past, present, and future.

Prerequisites: Take ASL 182 Minimum grade C

Corequisites: Take ASL 211

**ASL 282. ASL Lab 4. 1.0 Credit.** Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0

This course provides an opportunity to enhance the review and expansion of the essential skills of American Sign Language. Emphasis is placed on the continuing development of expressive and receptive skills and study of authentic and representative literary and cultural texts through the use of various supplementary learning media and materials. Upon completion, students should be able to communicate spontaneously and accurately with increasing complexity and sophistication.

Prerequisites: Take ASL 281 Minimum grade C

Corequisites: Take ASL 212

## Anthropology (ANT)

**ANT 210. General Anthropology. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course introduces the physical, archaeological, linguistic, and ethnological fields of anthropology. Topics include human origins, genetic variations, archaeology, linguistics, primatology, and contemporary cultures. Upon completion, students should be able to demonstrate an understanding of the four major fields of anthropology.

Prerequisites: Complete one of the following options: Take DRE 098

Take EFL 111 EFL 112 with a minimum grade of C

Take ENG 111 with a minimum grade of C

**ANT 220. Cultural Anthropology. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course introduces the nature of human culture. Emphasis is placed on cultural theory, methods of fieldwork, and cross-cultural comparisons in the areas of ethnology, language, and the cultural past. Upon completion, students should be able to demonstrate an understanding of basic cultural processes and how cultural data are collected and analyzed.

**ANT 221. Comparative Cultures. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course provides an ethnographic survey of societies around the world covering their distinctive cultural characteristics and how these relate to cultural change. Emphasis is placed on the similarities and differences in social institutions such as family, economics, politics, education, and religion. Upon completion, students should be able to demonstrate knowledge of a variety of cultural adaptive strategies.

Prerequisites: Complete one of the following options: Take DRE 098

Take EFL 111 EFL 112 with a minimum grade of C

Take ENG 111 with a minimum grade of C

## Architecture (ARC)

**ARC 111. Introduction to Architectural Technology. 3.0 Credits.**

Class-1.0. Clinical-0.0. Lab-6.0. Work-0.0

This course introduces basic architectural drafting techniques, lettering, use of architectural and engineer scales, and sketching. Topics include orthographic, axonometric, and oblique drawing techniques using architectural plans, elevations, sections, and details; reprographic techniques; and other related topics. Upon completion, students should be able to prepare and print scaled drawings within minimum architectural standards.

**ARC 112. Construction Materials & Methods. 4.0 Credits.** Class-3.0.

Clinical-0.0. Lab-2.0. Work-0.0

This course introduces construction materials and methodologies. Topics include construction terminology, traditional and alternative materials and their properties, manufacturing processes, construction techniques, and other related topics. Upon completion, students should be able to detail construction assemblies and identify construction materials and properties.

**ARC 113. Residential Architectural Technology. 3.0 Credits.** Class-1.0.

Clinical-0.0. Lab-6.0. Work-0.0

This course covers intermediate residential working drawings. Topics include residential plans, elevations, sections, details, schedules, and other related topics. Upon completion, students should be able to prepare a set of residential working drawings that are within accepted architectural standards.

Prerequisites: Take ARC 111

Corequisites: Take ARC 112

**ARC 114. Architectural CAD. 2.0 Credits.** Class-1.0. Clinical-0.0.

Lab-3.0. Work-0.0

This course introduces basic architectural CAD techniques. Topics include basic commands and system hardware and software. Upon completion, students should be able to prepare and plot architectural drawings to scale within accepted architectural standards.

**ARC 120. Interior Design-Residential. 3.0 Credits.** Class-1.0.

Clinical-0.0. Lab-6.0. Work-0.0

This course covers principles of light construction and materials. Topics include terminology, components, and light construction codes. Upon completion, students should be able to understand light construction principles.

Prerequisites: Take ARC 111

**ARC 131. Building Codes. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-2.0.

Work-0.0

This course covers the methods of researching building codes for specific projects. Topics include residential and commercial building codes. Upon completion, students should be able to determine the code constraints governing construction projects.

Prerequisites: Take ARC 111 or ARC 112

**ARC 132. Specifications & Contracts. 2.0 Credits.** Class-2.0.

Clinical-0.0. Lab-0.0. Work-0.0

This course covers the development of written specifications and the implications of different contractual arrangements. Topics include specification development, contracts, bidding material research, and agency responsibilities. Upon completion, students should be able to write a specification section and demonstrate the ability to interpret contractual responsibilities.

Prerequisites: Take ARC 112

**ARC 133. Construction Document Analysis. 2.0 Credits.** Class-1.0. Clinical-0.0. Lab-3.0. Work-0.0

This course covers the analysis of building construction drawings. Emphasis is placed on material identification, understanding construction details, and the relationships of building structural, mechanical, plumbing, and electrical systems. Upon completion, students should be able to analyze a set of construction drawings by identifying building construction materials and understanding construction details and engineering systems.

**ARC 141. Elementary Structures for Architecture. 4.0 Credits.** Class-4.0. Clinical-0.0. Lab-0.0. Work-0.0

This course covers concepts of elementary structures in architecture. Topics include structural form, statics, strength of materials, structural behavior, and the relationship between structures and architectural form. Upon completion, students should be able to size simple structural elements.

Prerequisites: Complete one of the following options: Take ARC 111 and MAT 121

Take ARC 111 and MAT 171

**ARC 160. Residential Design. 3.0 Credits.** Class-1.0. Clinical-0.0. Lab-6.0. Work-0.0

This course introduces the methodology of basic residential design. Topics include residential site design, space organization and layout, residential styles, and the development of schematic design. Upon completion, students should be able to design a residence.

Prerequisites: Take ARC 111

Corequisites: Take ARC 112

**ARC 197. Select Seminar in Arch Tech. 2.0 Credits.** Class-2.0. Clinical-0.0. Lab-0.0. Work-0.0

This course provides an opportunity to explore topics of current interest. Emphasis is placed on the development of critical listening skills and the presentation of seminar issues. Upon completion, students should be able to critically analyze issues and establish informed opinions.

**ARC 210. Intro to Sustain Design. 2.0 Credits.** Class-1.0. Clinical-0.0. Lab-3.0. Work-0.0

This course introduces concepts and principles related to sustainable site development and architectural design. Topics include low impact and sustainable site development, water efficiency, energy efficiency, material and resource management, indoor environmental quality, and return on investment. Upon completion, students should be able to articulate and integrate sustainable design principles into site and architectural design. Prerequisites: Take ARC 111

**ARC 212. Commercial Constr Tech. 3.0 Credits.** Class-1.0. Clinical-0.0. Lab-6.0. Work-0.0

This course introduces regional construction techniques for commercial plans, elevations, sections, and details. Topics include production of a set of commercial contract documents and other related topics. Upon completion, students should be able to prepare a set of working drawings in accordance with building codes.

Prerequisites: Take ARC 111 and ARC 225

Corequisites: Take ARC 112

**ARC 213. Design Project. 4.0 Credits.** Class-2.0. Clinical-0.0. Lab-6.0. Work-0.0

This course provides the opportunity to design and prepare a set of contract documents within an architectural setting. Topics include schematic design, design development, construction documents, and other related topics. Upon completion, students should be able to prepare a set of commercial contract documents. This course will also introduce plumbing, mechanical (HVAC), and electrical systems for the architectural environment.

Prerequisites: Take ARC 111, ARC 112, ARC 114, and ARC 225

**ARC 214. Architectural Statics. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course covers the concepts of elementary statics as applied to architecture. Topics include forces, resultants, and types of force system; equations of equilibrium; reactions of simple architectural structures; internal forces in architectural roof trusses; frames and beams; centroids and moments of inertia as applied to architecture. Upon completion, students should be able to solve problems which require the ability to analyze systems of forces in static equilibrium as applied to architectural forms.

Prerequisites: Take All: ARC 111, ARC 112, and MAT 121

**ARC 215. Architectural Strength of Materials. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course covers the concepts of elementary strength of materials within architecture. Topics include structural form, architectural strength of materials, structural behavior, and the relationship between structures and architectural form. Upon completion, students should be able to size simple structural elements to specific architectural forms.

Prerequisites: Take All: ARC 111, ARC 112, and MAT 121

**ARC 220. Advanced Architectural CAD. 2.0 Credits.** Class-1.0. Clinical-0.0. Lab-3.0. Work-0.0

This course provides file management, productivity, and CAD customization skills. Emphasis is placed on developing advanced proficiency techniques. Upon completion, students should be able to create prototype drawings and symbol libraries, compose sheets with multiple details, and use advanced drawing and editing commands. Civil3D and Microstation CAD applications will be used in this course.

Prerequisites: Take ARC 114

**ARC 221. Architectural 3-D CAD. 3.0 Credits.** Class-1.0. Clinical-0.0. Lab-4.0. Work-0.0

This course introduces architectural three-dimensional CAD applications. Topics include three-dimensional drawing, coordinate systems, viewing, rendering, modeling, and output options. Upon completion, students should be able to prepare architectural three-dimensional drawings and renderings. SketchUp, Inventor, and Rhino3D are the primary applications used in this course.

Prerequisites: Take ARC 114

**ARC 225. Architectural Building Information Modeling I. 2.0 Credits.** Class-1.0. Clinical-0.0. Lab-3.0. Work-0.0

This course is an introduction to the fundamentals of Building Information Modeling (BIM) as a construction documentation system. Topics include basic parametric modeling, creating new types and families of components, and using 3D models to create design drawings. Upon completion, students should be able to use BIM software to create, edit, and print rudimentary architectural 3D computer models. Focus for this course: AutoDesk Revit Architecture.



**ARC 226. Architectural Building Information Modeling II. 2.0 Credits.** Class-1.0. Clinical-0.0. Lab-3.0. Work-0.0

This course covers advanced concepts of Building Information Modeling (BIM) including complex drawing generation and inter-disciplinary collaboration. Topics include advanced parametric modeling and model analysis, inter-disciplinary coordination, design web format models, material take-off, schedules, and rendering. Upon completion, students should be able to apply BIM software to create full 3D project models and convert them to scaled working or presentation drawings.

Prerequisites: Take ARC 225

**ARC 230. Environmental Systems. 4.0 Credits.** Class-3.0. Clinical-0.0. Lab-3.0. Work-0.0

This course introduces plumbing, mechanical (HVAC), and electrical systems for the architectural environment. Topics include basic plumbing, mechanical, and electrical systems for residential and/or commercial buildings with an introduction to selected code requirements. Upon completion, students should be able to develop schematic drawings for plumbing, mechanical, and electrical systems and perform related calculations.

Prerequisites: Complete one of the following options:

- ARC 111 and MAT 121
- ARC 111 and MAT 171

**ARC 231. Architectural Presentations. 4.0 Credits.** Class-2.0.

Clinical-0.0. Lab-4.0. Work-0.0

This course introduces architectural presentation techniques. Topics include perspective drawing, shadow projection, texturization, rendered plans, elevations, and other related topics. Upon completion, students should be able to present ideas graphically and do rendered presentation drawings.

Prerequisites: Take ARC 111

**ARC 235. Architectural Portfolio. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0

This course covers the methodology for the creation of an architectural portfolio. Topics include preparation of marketing materials and a presentation strategy using conventional and/or digital design media. Upon completion, students should be able to produce an architectural portfolio of selected projects.

Prerequisites: Take ARC 111 and ARC 114

**ARC 250. Survey of Architecture. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course introduces the historical trends in architectural form. Topics include historical and current trends in architecture. Upon completion, students should be able to demonstrate an understanding of significant historical and current architectural styles.

**ARC 251. Advanced Survey of Architecture. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course builds on prior knowledge of historical trends in architectural form, and explores those topics in greater depth. Topics could include historic preservation, the social and political contexts of architectural design, and design theory. Upon completion, students should be able to demonstrate a deeper understanding of significant historical and current architectural styles and theories.

Prerequisites: Take ARC 250

**ARC 262. Architectural Animation & Video. 3.0 Credits.** Class-1.0. Clinical-0.0. Lab-6.0. Work-0.0

This course covers three-dimensional architectural animation. Topics include storyboarding, rendered animation creation, audio and video input/output, and techniques for camera and object movement in and around buildings. Upon completion, students should be able to produce rendered architectural animations with sound and archive data to selected media. This course will focus on Autodesk 3DS software.

Prerequisites: Take ARC 221

**ARC 264. Digital Architecture. 2.0 Credits.** Class-1.0. Clinical-0.0. Lab-3.0. Work-0.0

This course covers multiple digital architectural techniques. Topics include spreadsheets and word processing procedures, on-line resources, modems, e-mail, image capture, multimedia, and other related topics. Upon completion, students should be able to transmit/receive electronic data, create multimedia presentations, and produce a desktop publishing document. Focus for this course will be SketchUP and Adobe PhotoShop software.

Prerequisites: Take ARC 111 Minimum grade C

## Art (ART)

**ART 111. Art Appreciation. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course introduces the origins and historical development of art. Emphasis is placed on the relationship of design principles to various art forms including but not limited to sculpture, painting, and architecture. Upon completion, students should be able to identify and analyze a variety of artistic styles, periods, and media. Students seeking to take this course to meet the college transfer humanities requirement may also take ART 114 or ART 115 (no ART prerequisites); Concepts related to media and technique will be introduced.

**ART 113. Art Methods and Materials. 3.0 Credits.** Class-0.0. Clinical-0.0. Lab-6.0. Work-0.0

This course provides an overview of media and techniques. Emphasis is placed on exploration and manipulation of materials. Upon completion, students should be able to demonstrate familiarity with a variety of methods, materials, and processes.

**ART 114. Art History Survey I. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course covers the development of art forms from ancient times to the Renaissance. Emphasis is placed on content, terminology, design, and style. Upon completion, students should be able to demonstrate an historical understanding of art as a product reflective of human social development. Students seeking to take this course to meet the college transfer humanities requirement may also take ART 111 or ART 115 (no ART prerequisites).

Prerequisites: Take DRE 098

**ART 115. Art History Survey II. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course covers the development of art forms from the Renaissance to the present. Emphasis is placed on content, terminology, design, and style. Upon completion, students should be able to demonstrate an historical understanding of art as a product reflective of human social development. Students seeking to take this course to meet the college transfer humanities requirement may also take ART-111 or ART-115 (no ART prerequisites).

Prerequisites: Take DRE 098

**ART 116. Survey of American Art. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course covers the development of American art forms from colonial times to the present. Emphasis is placed on architecture, painting, sculpture, graphics, and the decorative arts. Upon completion, students should be able to demonstrate understanding of the history of the American creative experience.

**ART 117. Non-Western Art History. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course introduces non-Western cultural perspectives. Emphasis is placed on, but not limited to, African, Oriental, and Oceanic art forms throughout history. Upon completion, students should be able to demonstrate an historical understanding of art as a product reflective of non-Western social and cultural development.

**ART 121. Two-Dimensional Design. 3.0 Credits.** Class-0.0. Clinical-0.0. Lab-6.0. Work-0.0

This course introduces the elements and principles of design as applied to two-dimensional art. Emphasis is placed on the structural elements, the principles of visual organization, and the theories of color mixing and interaction. Upon completion, students should be able to understand and use critical and analytical approaches as they apply to two-dimensional visual art.

**ART 122. Three-Dimensional Design. 3.0 Credits.** Class-0.0. Clinical-0.0. Lab-6.0. Work-0.0

This course introduces basic studio problems in three-dimensional visual design. Emphasis is placed on the structural elements and organizational principles as applied to mass and space. Upon completion, students should be able to apply three-dimensional design concepts.

**ART 131. Drawing I. 3.0 Credits.** Class-0.0. Clinical-0.0. Lab-6.0. Work-0.0

This course introduces the language of drawing and the use of various drawing materials. Emphasis is placed on drawing techniques, media, and graphic principles. Upon completion, students should be able to demonstrate competence in the use of graphic form and various drawing processes.

**ART 132. Drawing II. 3.0 Credits.** Class-0.0. Clinical-0.0. Lab-6.0. Work-0.0

This course continues instruction in the language of drawing and the use of various materials. Emphasis is placed on experimentation in the use of drawing techniques, media, and graphic materials. Upon completion, students should be able to demonstrate increased competence in the expressive use of graphic form and techniques.

Prerequisites: Take ART 131

**ART 135. Figure Drawing I. 3.0 Credits.** Class-0.0. Clinical-0.0. Lab-6.0. Work-0.0

This course introduces rendering the human figure with various drawing materials. Emphasis is placed on the use of the visual elements, anatomy, and proportion in the representation of the draped and undraped figure. Upon completion, students should be able to demonstrate competence in drawing the human figure.

Prerequisites: Take ART 131

**ART 171. Computer Art I. 3.0 Credits.** Class-0.0. Clinical-0.0. Lab-6.0. Work-0.0

This course introduces the use of the computer as a tool for solving visual problems. Emphasis is placed on fundamentals of computer literacy and design through bit-mapped image manipulation. Upon completion, students should be able to demonstrate an understanding of paint programs, printers, and scanners to capture, manipulate, and output images. In addition to Photoshop, students will use Illustrator to create 2D computer generated art.

**ART 212. Gallery Assistantship I. 3.0 Credits.** Class-0.0. Clinical-0.0. Lab-6.0. Work-0.0

This course covers the practical application of display techniques. Emphasis is placed on preparation of artwork for installation, hardware systems, and exhibition graphics. Upon completion, students should be able to demonstrate basic gallery exhibition skills.

**ART 213. Gallery Assistantship II. 3.0 Credits.** Class-0.0. Clinical-0.0. Lab-6.0. Work-0.0

This course provides additional experience in display techniques. Emphasis is placed on preparation of artwork for exhibition, alternative methods of installation, hardware systems, and exhibition graphics. Upon completion, students should be able to demonstrate independent decision-making and exhibition expertise.

Prerequisites: Take ART 212

**ART 214. Portfolio and Resume. 1.0 Credit.** Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0

This course covers resume writing, interview skills, and the preparation and presentation of an art portfolio. Emphasis is placed on the preparation of a portfolio of original artwork, the preparation of a photographic portfolio, approaches to resume writing, and interview techniques. Upon completion, students should be able to photograph and present a digital portfolio and write an effective resume.

**ART 231. Printmaking I. 3.0 Credits.** Class-0.0. Clinical-0.0. Lab-6.0. Work-0.0

This course introduces printmaking: its history, development techniques, and processes. Emphasis is placed on basic applications with investigation into image source and development. Upon completion, students should be able to produce printed images utilizing a variety of methods. This course introduces relief, intaglio, serigraphy and planographic processes.

**ART 232. Printmaking II. 3.0 Credits.** Class-0.0. Clinical-0.0. Lab-6.0. Work-0.0

This course includes additional methods and printmaking processes. Emphasis is placed on the printed image as related to method, source, and concept. Upon completion, students should be able to produce expressive images utilizing both traditional and innovative methods.

Prerequisites: Take ART 231

**ART 235. Figure Drawing II. 3.0 Credits.** Class-0.0. Clinical-0.0. Lab-6.0. Work-0.0

This course extends the study and rendering of the draped and undraped human figure. Emphasis is placed on the exploration of materials and approaches to drawing. Upon completion, students should be able to demonstrate creativity in the representation of the figure.

Prerequisites: Take ART 135 Minimum grade C

**ART 240. Painting I. 3.0 Credits.** Class-0.0. Clinical-0.0. Lab-6.0. Work-0.0

This course introduces the language of painting and the use of various painting materials. Emphasis is placed on the understanding and use of various painting techniques, media, and color principles. Upon completion, students should be able to demonstrate competence in the use of creative processes directed toward the development of expressive form.

**ART 241. Painting II. 3.0 Credits.** Class-0.0. Clinical-0.0. Lab-6.0. Work-0.0

This course provides a continuing investigation of the materials, processes, and techniques of painting. Emphasis is placed on the exploration of expressive content using a variety of creative processes. Upon completion, students should be able to demonstrate competence in the expanded use of form and variety. As in Painting I, students will principally work on easels using oil or acrylic.

Prerequisites: Take ART 240

**ART 242. Landscape Painting. 3.0 Credits.** Class-0.0. Clinical-0.0. Lab-6.0. Work-0.0

This course introduces and practices the skills and techniques of open-air painting. Emphasis is placed on techniques of painting summer foliage, skies, and mountains, and the elements of aerial perspective. Upon completion, students should be able to complete an open-air landscape painting employing brush, knife, scumbling, and glazing techniques. Historical and contemporary styles and techniques related to landscape painting will be introduced.

Prerequisites: Take ART 240

**ART 243. Portrait Painting. 3.0 Credits.** Class-0.0. Clinical-0.0. Lab-6.0. Work-0.0

This course covers the portrait as subject matter by use of live models. Topics include composition, color mixing, and the history of portraiture. Upon completion, students should be able to demonstrate competence in the traditional approach to portrait painting.

Prerequisites: Take ART 240

**ART 244. Watercolor. 3.0 Credits.** Class-0.0. Clinical-0.0. Lab-6.0. Work-0.0

This course introduces basic methods and techniques used in watercolor. Emphasis is placed on application, materials, content, and individual expression. Upon completion, students should be able to demonstrate a variety of traditional and nontraditional concepts used in watercolor media.

**ART 245. Metals I. 3.0 Credits.** Class-0.0. Clinical-0.0. Lab-6.0. Work-0.0

This course introduces basic metal design in traditional and contemporary art forms using brass, copper, and silver. Emphasis is placed on designing and fabricating jewelry, small sculptures, and utilitarian objects. Upon completion, students should be able to design and produce small art objects.

Prerequisites: Take ART 121 Minimum grade C

**ART 246. Metals II. 3.0 Credits.** Class-0.0. Clinical-0.0. Lab-6.0. Work-0.0

This course provides a continuation of metal design utilizing basic methods of casting and other processes. Emphasis is placed on individualized design. Upon completion, students should be able to design and produce expressive forms.

Prerequisites: Take ART 245

**ART 247. Jewelry I. 3.0 Credits.** Class-0.0. Clinical-0.0. Lab-6.0. Work-0.0

This course introduces a basic understanding of the design and production of jewelry. Emphasis is placed on concepts and techniques using metals and other materials. Upon completion, students should be able to demonstrate an ability to use appropriate methods to create unique jewelry. Processes such as piercing, filing, forming and forging will be introduced.

**ART 248. Jewelry II. 3.0 Credits.** Class-0.0. Clinical-0.0. Lab-6.0. Work-0.0

This course is a continuation of the skills learned in ART 247. Emphasis is placed on the creation of individual designs that utilize a variety of techniques such as casting, cloisonne, and plique-a-jour. Upon completion, students should be able to create jewelry which demonstrates originality.

Prerequisites: Take ART 247

**ART 260. Photography Appreciation. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course introduces the origins and historical development of photography. Emphasis is placed on the study of composition and history of photography as an art form. Upon completion, students should be able to recognize and produce, using color transparencies, properly exposed, well-composed photographs. Using their own digital cameras, students will receive instruction and practice in basic camera techniques and will produce a digital portfolio.

**ART 261. Photography I. 3.0 Credits.** Class-0.0. Clinical-0.0. Lab-6.0. Work-0.0

This course introduces photographic equipment, theory, and processes. Emphasis is placed on camera operation, composition, darkroom technique, and creative expression. Upon completion, students should be able to successfully expose, develop, and print a well-conceived composition. Using their own 35MM camera to take photographs, students will develop printing techniques such as burning dodging, controlling density and contrast, and basic photo finishing.

Prerequisites: Take ART 260 Minimum grade C

**ART 262. Photography II. 3.0 Credits.** Class-0.0. Clinical-0.0. Lab-6.0. Work-0.0

This course introduces the creative manipulation of alternative photographic materials and processes such as toning, hand coloring, infrared, and multiple exposure. Emphasis is placed on personal vision and modes of seeing. Upon completion, students should be able to create properly exposed images using a variety of photographic materials and processes.

Prerequisites: Take ART 261

**ART 264. Digital Photography I. 3.0 Credits.** Class-0.0. Clinical-0.0. Lab-6.0. Work-0.0

This course introduces digital photographic equipment, theory and processes. Emphasis is placed on camera operation, composition, computer photo manipulation and creative expression. Upon completion, students should be able to successfully expose, digitally manipulate, and print a well-conceived composition.

Prerequisites: Take ART 260

**ART 265. Digital Photography II. 3.0 Credits.** Class-0.0. Clinical-0.0. Lab-6.0. Work-0.0

This course provides exploration of the concepts and processes of photo manipulation through complex composite images, special effects, color balancing and image/text integration. Emphasis is placed on creating a personal vision and style. Upon completion, students should be able to produce well-executed images using a variety of photographic and photo manipulative approaches.

Prerequisites: Take ART 264

**ART 266. Videography I. 3.0 Credits.** Class-0.0. Clinical-0.0. Lab-6.0. Work-0.0

This course introduces various aspects of basic video production including concept development, scripting, camera operation, and post-production. Emphasis is placed on creative expression, camera handling, story boarding, and editing. Upon completion, students should be able to demonstrate a basic understanding of video camera operation and production techniques.

**ART 267. Videography II. 3.0 Credits.** Class-0.0. Clinical-0.0. Lab-6.0. Work-0.0

This course is designed to provide a framework for the production of a long-term video project. Emphasis is placed on realization of the unique creative vision. Upon completion, students should be able to produce a thematically coherent, edited video with sound and titling.

Prerequisites: Take ART 266

**ART 271. Computer Art II. 3.0 Credits.** Class-0.0. Clinical-0.0. Lab-6.0. Work-0.0

This course includes advanced computer imaging techniques. Emphasis is placed on creative applications of digital technology. Upon completion, students should be able to demonstrate command of computer systems and applications to express their personal vision.

Prerequisites: Take ART 171

**ART 281. Sculpture I. 3.0 Credits.** Class-0.0. Clinical-0.0. Lab-6.0. Work-0.0

This course provides an exploration of the creative and technical methods of sculpture with focus on the traditional processes. Emphasis is placed on developing basic skills as they pertain to three-dimensional expression in various media. Upon completion, students should be able to show competence in variety of sculptural approaches. Students will develop an understanding of historical as well as contemporary ideas related to sculpture.

**ART 282. Sculpture II. 3.0 Credits.** Class-0.0. Clinical-0.0. Lab-6.0. Work-0.0

This course builds on the visual and technical skills learned in ART 281. Emphasis is placed on developing original solutions to sculptural problems in a variety of media. Upon completion, students should be able to express individual ideas using the techniques and materials of sculpture.

Prerequisites: Take ART 281

**ART 283. Ceramics I. 3.0 Credits.** Class-0.0. Clinical-0.0. Lab-6.0. Work-0.0

This course provides an introduction to three-dimensional design principles using the medium of clay. Emphasis is placed on fundamentals of forming, surface design, glaze application, and firing. Upon completion, students should be able to demonstrate skills in slab and coil construction, simple wheel forms, glaze technique, and creative expression.

Assignments are structured to encourage students to explore their own personal expression.

**ART 284. Ceramics II. 3.0 Credits.** Class-0.0. Clinical-0.0. Lab-6.0. Work-0.0

This course covers advanced hand building and wheel techniques. Emphasis is placed on creative expression, surface design, sculptural quality, and glaze effect. Upon completion, students should be able to demonstrate a high level of technical competence in forming and glazing with a development of three-dimensional awareness. The aesthetics of pottery form are explored.

Prerequisites: Take ART 283

**ART 285. Ceramics III. 3.0 Credits.** Class-0.0. Clinical-0.0. Lab-6.0. Work-0.0

This course provides the opportunity for advanced self-determined work in sculptural and functional ceramics. Emphasis is placed on developing the technical awareness of clay bodies, slips, engobes, and firing procedures necessary to fulfill the student's artistic goals. Upon completion, students should be able to demonstrate a knowledge of materials and techniques necessary to successfully create original projects in the clay medium.

Through contractual agreement with the instructor, students continue to explore personal expression using the medium of clay.

Prerequisites: Take ART 284

**ART 286. Ceramics IV. 3.0 Credits.** Class-0.0. Clinical-0.0. Lab-6.0. Work-0.0

This course provides the opportunity for self-determined work in sculptural and functional ceramics. Emphasis is placed on developing the technical awareness of glaze materials, glaze formulation, and firing techniques necessary to fulfill the student's artistic goals. Upon completion, students should be able to demonstrate knowledge of materials and techniques necessary to successfully create original projects in the clay medium.

Through contractual agreement with the instructor, students continue to explore personal expression using the medium of clay.

Prerequisites: Take ART 285

**ART 288. Studio. 3.0 Credits.** Class-0.0. Clinical-0.0. Lab-6.0. Work-0.0

This course provides the opportunity for advanced self-determined work beyond the limits of regular studio course sequences. Emphasis is placed on creative self-expression and in-depth exploration of techniques and materials. Upon completion, students should be able to create original projects specific to media, materials, and techniques. Through contractual agreement with the instructor, students will continue to explore personal expressions in their chosen media.

## Astronomy (AST)

**AST 111. Descriptive Astronomy. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course introduces an overall view of modern astronomy. Topics include an overview of the solar system, the sun, stars, galaxies, and the larger universe. Upon completion, students should be able to demonstrate an understanding of the universe around them.

Corequisites: Take AST 111A

**AST 111A. Descriptive Astronomy Lab. 1.0 Credit.** Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0

The course is a laboratory to accompany AST 111. Emphasis is placed on laboratory experiences which enhance the materials presented in AST 111 and which provide practical experience. Upon completion, students should be able to demonstrate an understanding of the universe around them.

Corequisites: Take AST 111



**AST 151A. General Astronomy I Lab. 1.0 Credit.** Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0

The course is a laboratory to accompany AST 151. Emphasis is placed on laboratory experiences which enhance the materials presented in AST 151 and which provide practical experience. Upon completion, students should be able to demonstrate a general understanding of the solar system.

Corequisites: Take AST 151

**AST 151. General Astronomy I. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course introduces the science of modern astronomy with a concentration on the solar system. Emphasis is placed on the history and physics of astronomy and an introduction to the solar system, including the planets, comets, and meteors. Upon completion, students should be able to demonstrate a general understanding of the solar system.

## Automation & Robotics (ATR)

**ATR 112. Introduction to Automation. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0

This course introduces the basic principles of automated systems and describes the tasks that technicians perform on the job. Topics include the history, development, and current applications of robots and automated systems including their configuration, operation, components, and controls. Upon completion, students should be able to understand the basic concepts of automation and robotic systems.

**ATR 211. Robot Programming. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0

This course provides the operational characteristics of robots and programming in their respective languages. Topics include robot programming, teach pendants, PLC integration, operator interfaces, the interaction of external sensors, machine vision, network systems, and other related devices. Upon completion, students should be able to program and demonstrate the operation of various robots.

Prerequisites: Take ATR 112 or ELN 260

**ATR 214. Advanced PLCs. 4.0 Credits.** Class-3.0. Clinical-0.0. Lab-3.0. Work-0.0

This course introduces the study of high-level programming languages and advanced I/O modules. Topics include advanced programming languages; system networking; computer interfacing; analog and other intelligent I/O modules; and system troubleshooting. Upon completion, students should be able to write and troubleshoot systems using high-level languages and complex I/O modules.

Prerequisites: Take ELC 228 with a minimum grade of C

**ATR 218. Work Cell Integration. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0

This course introduces high technology systems which are currently being used in new automated manufacturing facilities. Topics include integration of robots and work cell components, switches, proxies, vision and photoelectric sensors, with the automated control and data gathering systems. Upon completion, students should be able to install, program, and troubleshoot an automated manufacturing cell and its associated data communications systems.

Prerequisites: Take ELC 228 Minimum grade C

**ATR 219. Automation Troubleshooting. 2.0 Credits.** Class-1.0. Clinical-0.0. Lab-3.0. Work-0.0

This course introduces troubleshooting procedures used in automated systems. Topics include logical fault isolation, diagnostic software usage, component replacement techniques, and calibration; safety of equipment; and protection of equipment while troubleshooting. Upon completion, students should be able to analyze and troubleshoot an automated system.

Prerequisites: Take ATR 219 Minimum grade C

## Automotive (AUT)

**AUT 113. Automotive Servicing I. 2.0 Credits.** Class-0.0. Clinical-0.0. Lab-6.0. Work-0.0

This course is a lab used as an alternative to co-op placement. Emphasis is placed on shop operations, troubleshooting, testing, adjusting, repairing, and replacing components using appropriate test equipment and service information. Upon completion, students should be able to perform a variety of automotive repairs using proper service procedures and to operate appropriate equipment.

Prerequisites: Take AUT 141 and AUT 151 Minimum grade C

**AUT 114. Safety and Emissions. 2.0 Credits.** Class-1.0. Clinical-0.0. Lab-2.0. Work-0.0

This course covers the laws, procedures, and specifications needed to perform a North Carolina State Safety and Emissions inspection. Topics include brake, steering and suspension, lighting, horn, windshield wiper, tire, mirrors, and emission control devices inspection. Upon completion, students should be able to perform complete and thorough North Carolina State Safety and Emissions inspections.

**AUT 114A. Safety and Emissions Lab. 1.0 Credit.** Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0

This course is an optional lab that allows students to enhance their understanding of North Carolina State Emissions Inspection failures. Topics include evaporative, positive crankcase ventilation, exhaust gas recirculation and exhaust emissions systems operation, including catalytic converter failure diagnosis. Upon completion, students should be able to employ diagnostic strategies to repair vehicle emissions failures resulting from North Carolina State Emissions inspection.

Corequisites: Take AUT 114

**AUT 116. Engine Repair. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0

This course covers the theory, construction, inspection, diagnosis, and repair of internal combustion engines and related systems. Topics include fundamental operating principles of engines and diagnosis, inspection, adjustment, and repair of automotive engines using appropriate service information. Upon completion, students should be able to perform basic diagnosis, measurement and repair of automotive engines using appropriate tools, equipment, procedures, and service information.

**AUT 116A. Engine Repair Lab. 1.0 Credit.** Class-0.0. Clinical-0.0. Lab-3.0. Work-0.0

This course is an optional lab to be used as an alternative to co-op placement in meeting the NATEF standards for total hours. Topics include diagnosis, inspection, adjustment, and repair of automotive engines using appropriate service information. Upon completion, students should be able to perform basic diagnosis, measurement and repair of automotive engines using appropriate tools, equipment, procedures, and service information.

Corequisites: Take AUT 116

**AUT 141. Suspension & Steering Systems. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0

This course covers principles of operation, types, and diagnosis/repair of suspension and steering systems to include steering geometry. Topics include manual and power steering systems and standard and electronically controlled suspension and steering systems. Upon completion, students should be able to service and repair steering and suspension components, check and adjust alignment angles, repair tires, and balance wheels.

**AUT 141A. Suspension & Steering Lab. 1.0 Credit.** Class-0.0. Clinical-0.0. Lab-3.0. Work-0.0

This course is an optional lab to be used as an alternative to co-op placement in meeting the NATEF standards for total hours. Topics include manual and power steering systems and standard and electronically controlled suspension and steering systems. Upon completion, students should be able to service and repair steering and suspension components, check and adjust alignment angles, repair tires, and balance wheels. Corequisites: Take AUT 141

**AUT 151. Brake Systems. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0

This course covers principles of operation and types, diagnosis, service, and repair of brake systems. Topics include drum and disc brakes involving hydraulic, vacuum boost, hydra-boost, electrically powered boost, and anti-lock and parking brake systems. Upon completion, students should be able to diagnose, service, and repair various automotive braking systems.

**AUT 151A. Brakes Systems Lab. 1.0 Credit.** Class-0.0. Clinical-0.0. Lab-3.0. Work-0.0

This course is an optional lab to be used as an alternative to co-op placement in meeting the NATEF standards for total hours. Topics include drum and disc brakes involving hydraulic, vacuum-boost, hydra-boost, electrically powered boost, and anti-lock, parking brake systems and emerging brake systems technologies. Upon completion, students should be able to diagnose, service, and repair various automotive braking systems. Corequisites: Take AUT 151

**AUT 163. Advanced Automotive Electricity. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0

This course covers electronic theory, wiring diagrams, test equipment, and diagnosis, repair, and replacement of electronics, lighting, gauges, horn, wiper, accessories, and body modules. Topics include networking and module communication, circuit construction, wiring diagrams, circuit testing, and troubleshooting. Upon completion, students should be able to properly use wiring diagrams, diagnose, test, and repair wiring, lighting, gauges, accessories, modules, and electronic concerns. Prerequisites: Take TRN 120

**AUT 181. Engine Performance 1. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0

This course covers the introduction, theory of operation, and basic diagnostic procedures required to restore engine performance to vehicles equipped with complex engine control systems. Topics include an overview of engine operation, ignition components and systems, fuel delivery, injection components and systems and emission control devices. Upon completion, students should be able to describe operation and diagnose/repair basic ignition, fuel and emission related driveability problems using appropriate test equipment/service information.

**AUT 183. Engine Performance 2. 4.0 Credits.** Class-2.0. Clinical-0.0. Lab-6.0. Work-0.0

This course covers study of the electronic engine control systems, the diagnostic process used to locate engine performance concerns, and procedures used to restore normal operation. Topics will include currently used fuels and fuel systems, exhaust gas analysis, emission control components and systems, OBD II (on-board diagnostics) and inter-related electrical/electronic systems. Upon completion, students should be able to diagnose and repair complex engine performance concerns using appropriate test equipment and service information. Prerequisites: Take AUT 181 Minimum grade C

**AUT 212. Auto Shop Management. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course covers the principles of management essential to decision-making, communication, authority, and leadership. Topics include shop supervision, shop organization, customer relations, cost effectiveness and work place ethics. Upon completion, students should be able to describe basic automotive shop operation from a management standpoint.

**AUT 213. Automotive Servicing 2. 2.0 Credits.** Class-1.0. Clinical-0.0. Lab-3.0. Work-0.0

This course is a lab used as an alternative to co-op placement. Emphasis is placed on shop operations, troubleshooting, testing, adjusting, repairing, and replacing components using appropriate test equipment and service information. Upon completion, students should be able to perform a variety of automotive repairs using proper service procedures and to operate appropriate equipment. Prerequisites: Take AUT 141, AUT 151, AUT 181, and AUT 163 with a minimum grade of C

**AUT 221. Automatic Transmissions/Transaxles. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0

This course covers operation, diagnosis, service, and repair of automatic transmissions/transaxles. Topics include hydraulic, pneumatic, mechanical, and electrical/electronic operation of automatic drive trains and the use of appropriate service tools and equipment. Upon completion, students should be able to explain operational theory, diagnose and repair automatic drive trains.

**AUT 221A. Automatic Transmissions/Transaxles Lab. 1.0 Credit.** Class-0.0. Clinical-0.0. Lab-3.0. Work-0.0

This course is an optional lab to be used as an alternative to co-op placement in meeting the NATEF standards for total hours. Topics include hydraulic, pneumatic, mechanical, and electrical/electronic operation of automatic drive trains and the use of appropriate service tools and equipment. Upon completion, students should be able to diagnose and repair automatic drive trains. Corequisites: Take AUT 221

**AUT 231A. Manual Transmissions/Transaxles/Drive Trains Lab. 1.0 Credit.** Class-0.0. Clinical-0.0. Lab-3.0. Work-0.0

This course is an optional lab for the program that needs to meet NATEF hour standards but does not have a co-op component in the program. Topics include manual drive train diagnosis, service and repair using appropriate service information, tools, and equipment. Upon completion, students should be able to diagnose and repair manual drive trains. Corequisites: Take AUT 231

**AUT 231. Manual Transmissions/Transaxles/Drive Trains. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0

This course covers the operation, diagnosis, and repair of manual transmissions/transaxles, clutches, driveshafts, axles, and final drives. Topics include theory of torque, power flow, and manual drive train servicing and repair using appropriate service information, tools, and equipment. Upon completion, students should be able to explain operational theory, diagnose and repair manual drive trains.

**AUT 281. Advanced Engine Performance. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0

This course utilizes service information and specialized test equipment to diagnose and repair power train control systems. Topics include computerized ignition, fuel and emission systems, related diagnostic tools and equipment, data communication networks, and service information. Upon completion, students should be able to perform diagnosis and repair. Prerequisites: Take AUT 181 TRN 120 Minimum grade C

## Automotive Body Repair (AUB)

**AUB 111. Painting & Refinishing I. 4.0 Credits.** Class-2.0. Clinical-0.0. Lab-6.0. Work-0.0

This course introduces the proper procedures for using automotive refinishing equipment and materials in surface preparation and application. Topics include federal, state, and local regulations, personal safety, refinishing equipment and materials, surface preparation, masking, application techniques, and other related topics. Upon completion, students should be able to identify and use proper equipment and materials in refinishing following accepted industry standards.

**AUB 112. Painting & Refinishing II. 4.0 Credits.** Class-2.0. Clinical-0.0. Lab-6.0. Work-0.0

This course covers advanced painting techniques and technologies with an emphasis on identifying problems encountered by the refinishing technician. Topics include materials application, color matching, correction of refinishing problems, and other related topics. Upon completion, students should be able to perform spot, panel, and overall refinishing repairs and identify and correct refinish problems.

Prerequisites: Take AUB 111

**AUB 114. Special Finishes. 2.0 Credits.** Class-1.0. Clinical-0.0. Lab-2.0. Work-0.0

This course introduces multistage finishes, custom painting, and protective coatings. Topics include base coats, advanced intermediate coats, clear coats, and other related topics. Upon completion, students should be able to identify and apply specialized finishes based on accepted industry standards.

Prerequisites: Take AUB 111

**AUB 121. Non-Structural Damage I. 3.0 Credits.** Class-1.0. Clinical-0.0. Lab-4.0. Work-0.0

This course introduces safety, tools, and the basic fundamentals of body repair. Topics include shop safety, damage analysis, tools and equipment, repair techniques, materials selection, materials usage, and other related topics. Upon completion, students should be able to identify and repair minor direct and indirect damage including removal/repairing/replacing of body panels to accepted standards.

**AUB 122. Non-Structural Damage II. 4.0 Credits.** Class-2.0. Clinical-0.0. Lab-6.0. Work-0.0

This course covers safety, tools, and advanced body repair. Topics include shop safety, damage analysis, tools and equipment, advanced repair techniques, materials selection, materials usage, movable glass, and other related topics. Upon completion, students should be able to identify and repair or replace direct and indirect damage to accepted standards including movable glass and hardware.

**AUB 131. Structural Damage I. 4.0 Credits.** Class-2.0. Clinical-0.0. Lab-4.0. Work-0.0

This course introduces safety, equipment, structural damage analysis, and damage repairs. Topics include shop safety, design and construction, structural analysis and measurement, equipment, structural glass, repair techniques, and other related topics. Upon completion, students should be able to analyze and perform repairs to a vehicle which has received light/moderate structural damage.

**AUB 132. Structural Damage II. 4.0 Credits.** Class-2.0. Clinical-0.0. Lab-6.0. Work-0.0

This course provides an in-depth study of structural damage analysis and repairs to vehicles that have received moderate to heavy structural damage. Topics include shop safety, structural analysis and measurement, equipment, structural glass, advanced repair techniques, structural component replacement and alignment, and other related topics. Upon completion, students should be able to analyze and perform repairs according to industry standards.

Prerequisites: Take AUB 131

**AUB 136. Plastics & Adhesives. 3.0 Credits.** Class-1.0. Clinical-0.0. Lab-4.0. Work-0.0

This course covers safety, plastic and adhesive identification, and the various repair methods of automotive plastic components. Topics include safety, identification, preparation, material selection, and the various repair procedures including refinishing. Upon completion, students should be able to identify, remove, repair, and/or replace automotive plastic components in accordance with industry standards.

**AUB 141. Mechanical & Electrical Components I. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0

This course covers the basic principles of automotive mechanical and electrical components. Topics include personal and environmental safety and suspension and steering, electrical, brake, heating and air-conditioning, cooling, drive train, and restraint systems. Upon completion, students should be able to identify system components and perform basic system diagnostic checks and/or repairs according to industry standards.

**AUB 162. Autobody Estimating. 2.0 Credits.** Class-1.0. Clinical-0.0. Lab-2.0. Work-0.0

This course provides a comprehensive study of autobody estimating. Topics include collision damage analysis, industry regulations, flat-rate and estimated time, and collision estimating manuals. Upon completion, students should be able to prepare and interpret a damage report.

## Baking and Pastry Arts (BPA)

**BPA 120. Petit Fours and Pastries. 3.0 Credits.** Class-1.0. Clinical-0.0. Lab-4.0. Work-0.0

This course introduces the basic principles of the preparation and plating of a variety of petit fours and individual dessert pastries. Emphasis is placed on traditional and contemporary petit fours and pastries utilizing updated production methods. Upon completion, students should be able to produce individual pastries and petit fours for buffet and special event settings.

Prerequisites: Take All: CUL 110 and CUL 160

**BPA 130. European Cakes and Tortes. 3.0 Credits.** Class-1.0. Clinical-0.0. Lab-4.0. Work-0.0

This course introduces the production of a wide variety of classical and modern cakes suitable for restaurants, retail shops and large-scale production. Emphasis is placed on classic cakes using the methods of mixing, filling, glazing and icing. Upon completion, students should be able to prepare, assemble, and decorate gelatin-based and layered tortes and cakes such as Bavarian, Dobos, and Sacher.

Prerequisites: Take All: CUL 110 and CUL 160

**BPA 150. Artisan & Specialty Bread. 4.0 Credits.** Class-1.0. Clinical-0.0. Lab-6.0. Work-0.0

This course provides an advanced study in the art and craft of bread making. Topics include pertinent formulas and techniques associated with naturally leavened loaves, hearth breads, focaccia, flat breads, and other breads utilizing a variety of grains. Upon completion, students should be able to prepare artisan and specialty breads that meet or exceed the expectations of restaurant and retail publics.

Prerequisites: Take CUL 110 CUL 160 CUL 160A Minimum grade C

**BPA 165. Hot and Cold Desserts. 3.0 Credits.** Class-1.0. Clinical-0.0. Lab-4.0. Work-0.0

This course covers the principles and techniques of frozen desserts, souffles, cobblers, crisps, and strudel dough products. Topics include bombes, parfaits, baked Alaska, ice cream, sorbets, sherbets and granites; hand-stretched strudel products, crepes, and hot/cold souffles. Upon completion, student should be able to prepare and plate hot and cold desserts with suitable sauces and garnishes.

Prerequisites: Take All: CUL 110 and CUL 160

**BPA 210. Cake Design and Decorating. 3.0 Credits.** Class-1.0. Clinical-0.0. Lab-4.0. Work-0.0

This course covers advanced concepts in the design and decoration of wedding cakes and other specialty cakes. Topics include baking, filling, and assembling cakes; cake design; finishing techniques utilizing gum paste, fondant, and royal icing; and advanced piping skills. Upon completion, students should be able to design, create, finish and evaluate the quality of wedding and specialty cakes.

Prerequisites: Take All: CUL 110 and CUL 160

**BPA 220. Confection Artistry. 4.0 Credits.** Class-1.0. Clinical-0.0. Lab-6.0. Work-0.0

This course introduces the principles and techniques of decorative sugar work and confectionary candy. Topics include nougat, marzipan modeling, pastillage and cocoa painting, confection candy and a variety of sugar techniques including blown, spun, poured and pulled. Upon completion, students should be able to prepare edible centerpieces and confections to enhance dessert buffets and plate presentations.

Prerequisites: Take All: CUL 110 and CUL 160

**BPA 230A. Chocolate Artistry Lab. 1.0 Credit.** Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0

This course provides a laboratory experience for enhancing student skills in the art and craft of chocolate. Emphasis is placed on chocolate tempering, piping, and molding; decorative work associated with cakes and centerpieces; and candy production techniques of filling, enrobing and dipping. Upon completion, students should be able to demonstrate a basic proficiency in the preparation of decorative chocolate centerpieces, garnishes and candies.

Prerequisites: Take All: CUL 110 and CUL 160

Corequisites: Take BPA 230

**BPA 230. Chocolate Artistry. 3.0 Credits.** Class-1.0. Clinical-0.0. Lab-4.0. Work-0.0

This course provides a study in the art and craft of chocolate. Topics include chocolate tempering, piping, and molding; decorative work associated with cakes and centerpieces; and the candy production techniques of filling, enrobing and dipping. Upon completion, students should be able to properly evaluate tempered chocolate and produce a variety of chocolate candies and decorative elements for garnishing desserts.

Prerequisites: Take All: CUL 110 and CUL 160

**BPA 240. Plated Desserts. 3.0 Credits.** Class-1.0. Clinical-0.0. Lab-4.0. Work-0.0

This course provides a study in the elements and principles of design as they relate to plated desserts. Topics include plate composition, portioning, flavor pairings, textures, temperatures, eye appeal, balance, color harmony and plate decorating/painting techniques such as stenciling and chocolate striping. Upon completion, students should be able to demonstrate competence in combining a variety of dessert components enhanced with plate decorating techniques.

Prerequisites: Take All: CUL 110 and CUL 160

**BPA 250. Dessert and Bread Production. 5.0 Credits.** Class-1.0. Clinical-0.0. Lab-8.0. Work-0.0

This course is designed to merge artistry and innovation with the practical baking and pastry techniques utilized in a production setting. Emphasis is placed on quantity bread and roll-in dough production, plated and platter presentations, seasonal/theme product utilization and cost effectiveness. Upon completion, students should be able to plan, prepare and evaluate breads and desserts within a commercial environment and determine production costs and selling prices.

Prerequisites: Take BPA 150

**BPA 260. Pastry and Baking Marketing. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0

This course is designed to cover the marketing concepts and merchandising trends utilized in bakery and pastry operations. Emphasis is placed on menu planning, pricing products/strategies, resale and wholesale distribution methods, legal implications, and advertising techniques. Upon completion, students should be able to create a marketing plan that will serve as a basis for a capstone experience.

Prerequisites: Take All: BPA 150 and BPA 210

Corequisites: Take BPA 250



## Banking and Finance (BAF)

**BAF 121. Economics for Bankers. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course is designed to provide bankers with an introduction to the fundamental principles of economics. Emphasis is placed on the basics of economics theory, macroeconomics, and examples of the application of economics to banking. Upon completion, students should be able to interpret economic indicators, relate basic principles of economic theory, describe inflation, and compare and contrast economic systems. Prerequisites: Take DMA 050, MAT 121, MAT 122, MAT 171, MAT 172, MAT 223, MAT 263, MAT 271, MAT 272, MAT 273, or MAT 285 Minimum grade C Take EFL 112, ENG 111, ENG 112, ENG 113, or ENG 114 with a minimum grade of C

**BAF 143. Financial Planning. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course covers the perspectives, principles, and practices of financial planning. Topics include investment, retirement, tax, and estate planning. Upon completion, students should be able to understand the process that looks at a customer's financial picture and recommend strategies to achieve the customer's objectives.

## Biology (BIO)

**BIO 110. Principles of Biology. 4.0 Credits.** Class-3.0. Clinical-0.0. Lab-3.0. Work-0.0

This course provides a survey of fundamental biological principles for non-science majors. Emphasis is placed on basic chemistry, cell biology, metabolism, genetics, evolution, ecology, diversity, and other related topics. Upon completion, students should be able to demonstrate increased knowledge and better understanding of biology as it applies to everyday life.

**BIO 111. General Biology I. 4.0 Credits.** Class-3.0. Clinical-0.0. Lab-3.0. Work-0.0

This course introduces the principles and concepts of biology. Emphasis is placed on basic biological chemistry, molecular and cellular biology, metabolism and energy transformation, genetics, evolution, and other related topics. Upon completion, students should be able to demonstrate understanding of life at the molecular and cellular levels. This course introduces the principles and concepts of biology. Emphasis is placed on basic biological chemistry, cell structure and function, metabolism, and energy transformation, genetics, evolution, classification, and other related topics. Upon completion, students should be able to demonstrate understanding of life at the molecular and cellular levels. This course has been approved to satisfy the comprehensive articulation agreement general education core requirement in natural sciences/Mathematics.

**BIO 112. General Biology II. 4.0 Credits.** Class-3.0. Clinical-0.0. Lab-3.0. Work-0.0

This course is a continuation of BIO 111. Emphasis is placed on organisms, evolution, biodiversity, plant and animal systems, ecology, and other related topics. Upon completion, students should be able to demonstrate comprehension of life at the organismal and ecological levels. Prerequisites: Take BIO 111 Minimum grade C

**BIO 120. Introductory Botany. 4.0 Credits.** Class-3.0. Clinical-0.0. Lab-3.0. Work-0.0

This course provides an introduction to the classification, relationships, structure, and function of plants. Topics include reproduction and development of seed and non-seed plants, levels of organization, form and function of systems, and a survey of major taxa. Upon completion, students should be able to demonstrate comprehension of plant form and function, including selected taxa of both seed and non-seed plants. Prerequisites: Take One: BIO 110 or BIO 111

**BIO 130. Introductory Zoology. 4.0 Credits.** Class-3.0. Clinical-0.0. Lab-3.0. Work-0.0

This course provides an introduction to the classification, relationships, structure, and function of major animal phyla. Emphasis is placed on levels of organization, reproduction and development, comparative systems, and a survey of selected phyla. Upon completion, students should be able to demonstrate comprehension of animal form and function including comparative systems of selected groups. Prerequisites: Take One: BIO 110 or BIO 111

**BIO 140A. Environmental Biology Lab. 1.0 Credit.** Class-0.0. Clinical-0.0. Lab-3.0. Work-0.0

This course provides a laboratory component to complement BIO 140. Emphasis is placed on laboratory and field experience. Upon completion, students should be able to demonstrate a practical understanding of environmental interrelationships and of contemporary environmental issues. Corequisites: Take BIO 140

**BIO 140. Environmental Biology. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course introduces environmental processes and the influence of human activities upon them. Topics include ecological concepts, population growth, natural resources, and a focus on current environmental problems from scientific, social, political, and economic perspectives. Upon completion, students should be able to demonstrate an understanding of environmental interrelationships and of contemporary environmental issues.

**BIO 150. Genetics in Human Affairs. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course describes the importance of genetics in everyday life. Topics include the role of genetics in human development, birth defects, cancer and chemical exposure, and current issues including genetic engineering and fertilization methods. Upon completion, students should be able to understand the relationship of genetics to society today and its possible influence on our future. Prerequisites: Take One: BIO 110 or BIO 111

**BIO 155. Nutrition. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course covers the biochemistry of foods and nutrients with consideration of the physiological effects of specialized diets for specific biological needs. Topics include cultural, religious, and economic factors that influence a person's acceptance of food, as well as nutrient requirements of the various life stages. Upon completion, students should be able to identify the functions and sources of nutrients, the mechanisms of digestion, and the nutritional requirements of all age groups.

**BIO 161. Introduction to Human Biology. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course provides a basic survey of human biology. Emphasis is placed on the basic structure and function of body systems and the medical terminology used to describe normal and pathological states. Upon completion, students should be able to demonstrate an understanding of normal anatomy and physiology and the appropriate use of medical terminology.

**BIO 163. Basic Anatomy & Physiology. 5.0 Credits.** Class-4.0. Clinical-0.0. Lab-2.0. Work-0.0

This course provides a basic study of the structure and function of the human body. Topics include a basic study of the body systems as well as an introduction to homeostasis, cells, tissues, nutrition, acid-base balance, and electrolytes. Upon completion, students should be able to demonstrate a basic understanding of the fundamental principles of anatomy and physiology and their interrelationships.

**BIO 165. Anatomy and Physiology I. 4.0 Credits.** Class-3.0. Clinical-0.0. Lab-3.0. Work-0.0

This course is the first of a two-course sequence which provides a comprehensive study of the anatomy and physiology of the human body. Topics include the structure, function, and interrelationship of organ systems with emphasis on the processes which maintain homeostasis. Upon completion, students should be able to demonstrate an in-depth understanding of principles of anatomy and physiology and their interrelationships.

**BIO 166. Anatomy and Physiology II. 4.0 Credits.** Class-3.0. Clinical-0.0. Lab-3.0. Work-0.0

This course is the second in a two-course sequence which provides a comprehensive study of the anatomy and physiology of the human body. Topics include the structure, function, and interrelationship of organ systems with emphasis on the processes which maintain homeostasis. Upon completion, students should be able to demonstrate an in-depth understanding of principles of anatomy and physiology and the interrelationships of all body systems.

Prerequisites: Take BIO 165

**BIO 168. Anatomy and Physiology I. 4.0 Credits.** Class-3.0. Clinical-0.0. Lab-3.0. Work-0.0

This course provides a comprehensive study of the anatomy and physiology of the human body. Topics include body organization, homeostasis, cytology, histology, and the integumentary, skeletal, muscular, and nervous systems and special senses. Upon completion, students should be able to demonstrate an in-depth understanding of principles of anatomy and physiology and their interrelationships.

Prerequisites: Complete one of the following options: Take DRE 098

Take ENG 111 with a minimum grade of C

Take ENG 112 ENG 113 or ENG 114 with a minimum grade of C

**BIO 169. Anatomy and Physiology II. 4.0 Credits.** Class-3.0. Clinical-0.0. Lab-3.0. Work-0.0

This course provides a continuation of the comprehensive study of the anatomy and physiology of the human body. Topics include the endocrine, cardiovascular, lymphatic, respiratory, digestive, urinary, and reproductive systems as well as metabolism, nutrition, acid-base balance, and fluid and electrolyte balance. Upon completion, students should be able to demonstrate an in-depth understanding of principles of anatomy and physiology and their interrelationships.

Prerequisites: Take BIO 168 Minimum grade C

**BIO 175. General Microbiology. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0

This course covers principles of microbiology with emphasis on microorganisms and human disease. Topics include an overview of microbiology and aspects of medical microbiology, identification and control of pathogens, disease transmission, host resistance, and immunity. Upon completion, students should be able to demonstrate knowledge of microorganisms and the disease process as well as aseptic and sterile techniques.

Prerequisites: Take One: BIO 110, BIO 111, BIO 163, BIO 165, or BIO 168

**BIO 275. Microbiology. 4.0 Credits.** Class-3.0. Clinical-0.0. Lab-3.0. Work-0.0

This course covers principles of microbiology and the impact these organisms have on man and the environment. Topics include the various groups of microorganisms, their structure, physiology, genetics, microbial pathogenicity, infectious diseases, immunology, and selected practical applications. Upon completion, students should be able to demonstrate knowledge and skills including microscopy, aseptic technique, staining, culture methods, and identification of microorganisms.

Prerequisites: Take One: BIO 110, BIO 111, BIO 163, BIO 165, or BIO 168

## Biomedical Equipment Technology (BMT)

**BMT 111. Introduction to Biomedical Field. 2.0 Credits.** Class-2.0. Clinical-0.0. Lab-0.0. Work-0.0

This course introduces the fundamental concepts of the health care delivery system. Topics include hospital organization and structure, BMET duties and responsibilities, and the professional and social interrelationships between services. Upon completion, students should be able to demonstrate an understanding of hospital organization as related to BMET duties.

**BMT 112. Hospital Safety Standards. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0

This course covers national, state, and local standards pertaining to hospital safety. Topics include electrical safety, gas safety, SMDA reporting, and JCAHO and FPA compliance. Upon completion, students should be able to conduct PM and safety inspections in compliance with safety regulations.

**BMT 120. Biomedical Anatomy & Physiology. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0

This course provides a basic study of human anatomy and physiology with emphasis on biomonitoring of body systems. Topics include homeostasis; cells and tissues; and the structure, function, and monitoring of body systems. Upon completion, students should be able to demonstrate a basic understanding of the structure, function, and biomedical monitoring of human body systems.

**BMT 212. BMET Instrumentation I. 6.0 Credits.** Class-3.0. Clinical-0.0. Lab-6.0. Work-0.0

This course covers theory of operation, circuit analysis, troubleshooting techniques, and medical applications for a variety of instruments and devices. Topics include electrodes, transducers, instrumentation amplifiers, electrocardiographs, monitors, recorders, defibrillators, ESU units, and related equipment used in clinical laboratories, intensive care units, and research facilities. Upon completion, students should be able to calibrate, troubleshoot, repair, and certify that instrumentation meets manufacturer's original specifications.

Prerequisites: Take ELC 131

**BMT 213. BMET Instrumentation II. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0

This course provides continued study of theory of operation, circuit analysis, troubleshooting techniques, and medical applications for a variety of instruments and devices. Topics include instruments found in clinical laboratories, intensive care units, and research facilities. Upon completion, students should be able to repair, calibrate, and certify that instrumentation meets manufacturers' original specifications.

Prerequisites: Take BMT 212

**BMT 223. Imaging Techniques/Laser Fundamentals. 4.0 Credits.** Class-3.0. Clinical-0.0. Lab-2.0. Work-0.0

This course covers techniques associated with X-Ray, CT Scan, Magnetic Resonance Imaging and ultrasound, along with fundamental concepts and applications of medical lasers. Topics include radiation interaction with matter, X-Ray emissions, beam restricting devices, laser energy generation, and laser usage in surgery and other related medical procedures. Upon completion, students should be able to understand the operation of imaging devices, evaluate, calibrate, align, and provide safety instruction in usage of medical lasers.

**BMT 225. Biomedical Trouble Shooting. 3.0 Credits.** Class-1.0. Clinical-0.0. Lab-4.0. Work-0.0

This course is designed to provide students with basic problem solving skills, and to track down and identify problems frequently encountered with medical instrumentation. Emphasis is placed on developing logical troubleshooting techniques using technical manuals, flowcharts, and schematics, to diagnose equipment faults. Upon completion, students should be able to logically diagnose and isolate faults, and perform repairs to meet manufacturer specifications.

Prerequisites: Take BMT 212

## Blueprint Reading (BPR)

**BPR 130. Print Reading-Construction. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course covers the interpretation of prints and specifications that are associated with design and construction projects. Topics include interpretation of documents for foundations, floor plans, elevations, and related topics. Upon completion, students should be able to read and interpret construction prints and documents.

Prerequisites: Take DMA 010 DMA 020 DMA 030

## Broadcasting and Production Technology (BPT)

**BPT 110. Introduction to Broadcasting. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course introduces the field of broadcasting and other electronic media. Emphasis is placed on the history, development, and current status of radio, television, and related industries. Upon completion, students should be able to demonstrate knowledge of regulations, organizational structure, revenue sources, historical development, and on-going operation of broadcasting and related industries.

**BPT 111. Broadcast Law & Ethics. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course covers judicial, legislative, and administrative policies pertinent to the ethical and legal operation of broadcast and other electronic media organizations. Emphasis is placed on legal and ethical issues including First Amendment protection, FCC regulations, copyright, and libel laws. Upon completion, students should be able to demonstrate an understanding of the historical significance and modern-day application of important broadcast laws and policies.

Prerequisites: Take ENG 111 Minimum grade C

**BPT 112. Broadcast Writing. 4.0 Credits.** Class-3.0. Clinical-0.0. Lab-2.0. Work-0.0

This course introduces proper copy and script writing techniques and formats for radio, television, and other electronic media. Emphasis is placed on creating effective scripts for programs and promotional materials, including commercial and public radio service announcements for a specific target audience. Upon completion, students should be able to understand and write copy and scripts according to standard industry formats.

Prerequisites: Take ENG 111

**BPT 113. Broadcast Sales. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course covers sales principles applicable to radio, television, cable, and other electronic media. Emphasis is placed on prospecting and servicing accounts, developing clients, and preparing sales presentations. Upon completion, students should be able to create a sales presentation based upon standard ratings reports, prospect for new customers, and understand account management.

**BPT 121. Broadcast Speech I. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0

This course covers basic preparation and performance of on-air talents' speaking quality. Emphasis is placed on developing a pleasant and efficient voice with techniques applied to taped news, features, commercial copy, and announcing. Upon completion, students should be able to show improvement and aptitude in proper articulation, pronunciation, rate of delivery, pitch, breathing techniques, inflection, projection, and phrasing.

Prerequisites: Take ENG 111 Minimum grade C

**BPT 231. Video/TV Production I. 4.0 Credits.** Class-2.0. Clinical-0.0. Lab-6.0. Work-0.0

This course covers the language of film/video, shot composition, set design, lighting, production planning, scripting, editing, and operation of video and television production equipment. Emphasis is placed on mastering the body of knowledge and techniques followed in producing all forms of video and television production. Upon completion, students should be able to produce basic video and television productions in a team environment.

Prerequisites: Take BPT 112 Minimum grade C

## Business (BUS)

**BUS 110. Introduction to Business. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course provides a survey of the business world. Topics include the basic principles and practices of contemporary business. Upon completion, students should be able to demonstrate an understanding of business concepts as a foundation for studying other business subjects.

Prerequisites: Complete one of the following options: Take DRE 098

Take EFL 111 and EFL 112 with a minimum grade of C

Take ENG 111 with a minimum grade of C

**BUS 112. SIFE Business Development. 2.0 Credits.** Class-1.0.

Clinical-0.0. Lab-2.0. Work-0.0

This course provides students with opportunities for practical application of concepts taught in business, marketing, and economics courses.

Emphasis is placed on free markets in a global economy, how entrepreneurs succeed, personal financial success skills, and business ethics. Upon completion, students should be able to demonstrate knowledge in business, marketing, and economics and display creative problem-solving, public speaking, leadership, and public relations skills. Prerequisites: Take BUS 110

**BUS 115. Business Law I. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course introduces the student to the legal and ethical framework of business. Contracts, negotiable instruments, the law of sales, torts, crimes, constitutional law, the Uniform Commercial Code, and the court systems are examined. Upon completion the student should be able to identify legal and ethical issues that arise in business decisions and the laws that apply to them.

Prerequisites: Complete one of the following options:Take DRE 098  
Take EFL 111 EFL 112 with a minimum grade of C  
Take ENG 111 with a minimum grade of C

**BUS 116. Business Law II. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course includes the study of the legal and ethical framework of business. Business Organizations, property law, intellectual property law, agency and employment law, consumer law, secured transactions, and bankruptcy are examined. Upon completion, the student should be able to identify legal and ethical issues that arise in business decisions and the laws that apply to them.

Prerequisites: Take BUS 115

**BUS 121. Business Math. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0

This course covers fundamental mathematical operations and their application to business problems. Topics include payroll, pricing, interest and discount, commission, taxes, and other pertinent uses of mathematics in the field of business. Upon completion, students should be able to apply mathematical concepts to business.

Prerequisites: Take DMA 050 with a minimum grade of C  
Take DRE 098 or ENG 111 with a minimum grade of C

**BUS 125. Personal Finance. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course provides a study of individual and family financial decisions. Emphasis is placed on building useful skills in buying, managing finances, increasing resources, and coping with current economic conditions. Upon completion, students should be able to develop a personal financial plan.

Prerequisites: Complete one of the following options:Take DRE 098  
Take ENG 111 with a minimum grade of C

**BUS 135. Principles of Supervision. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course introduces the basic responsibilities and duties of the supervisor and his/her relationship to higher-level supervisors, subordinates, and associates. Emphasis is placed on effective utilization of the work force and understanding the role of the supervisor. Upon completion, students should be able to apply supervisory principles in the work place.

Prerequisites: Complete one of the following options:Take DRE 098  
Take EFL 111 EFL 112 with a minimum grade of C  
Take ENG 111 ENG 112 ENG 113 or ENG 114 with a minimum grade of C

**BUS 137. Principles of Management. 3.0 Credits.** Class-3.0.

Clinical-0.0. Lab-0.0. Work-0.0

This course is designed to be an overview of the major functions of management. Emphasis is placed on planning, organizing, controlling, directing, and communicating. Upon completion, students should be able to work as contributing members of a team utilizing these functions of management.

Prerequisites: Complete one of the following options:Take DRE 098  
Take EFL 111 and EFL 112 with a minimum grade of C  
Take ENG 111, ENG 112, ENG 113, or ENG 114 with a minimum grade of C

**BUS 139. Entrepreneurship I. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course provides an introduction to the principles of entrepreneurship. Topics include self-analysis of entrepreneurship readiness, the role of entrepreneur in economic development, legal problems, organizational structure, sources of financing, budgeting, and cash flow. Upon completion, students should have an understanding of the entrepreneurial process and issues faced by entrepreneurs.

Prerequisites: Complete one of the following options:Take DRE 098  
Take EFL 111 EFL 112 with a minimum grade of C  
Take ENG 111 with a minimum grade of C  
Take ENG 112 with a minimum grade of C  
Take ENG 113 with a minimum grade of C  
Take ENG 114 with a minimum grade of C

**BUS 152. Human Relations. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course introduces the concepts of effective human interaction in the business work environment. Topics include effective communication techniques, motivation, ego states, stress, and conflict. Upon completion, students should be able to explain the importance of human relations, apply motivational techniques, and implement strategies for resolving work-related conflicts.

Prerequisites: Complete one of the following options:Take DRE 098  
Take EFL 111 EFL 112 with a minimum grade of C  
Take ENG 111 with a minimum grade of C  
Take ENG 112 with a minimum grade of C  
Take ENG 113 with a minimum grade of C  
Take ENG 114 with a minimum grade of C

**BUS 153. Human Resource Management. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course introduces the functions of personnel/human resource management within an organization. Topics include equal opportunity and the legal environment, recruitment and selection, performance appraisal, employee development, compensation planning, and employee relations. Upon completion, students should be able to anticipate and resolve human resource concerns.

Prerequisites: Complete one of the following options:Take DRE 098  
Take EFL 111 EFL 112 with a minimum grade of C  
Take ENG 111 with a minimum grade of C  
Take ENG 112 with a minimum grade of C  
Take ENG 113 with a minimum grade of C  
Take ENG 114 with a minimum grade of C



**BUS 217. Employment Law and Regulations. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course introduces the principle laws and regulations affecting public and private organizations and their employees or prospective employees. Topics include fair employment practices, EEO, affirmative action, and employee rights and protections. Upon completion, students should be able to evaluate organization policy for compliance and assure that decisions are not contrary to law.

Prerequisites: Complete one of the following options:Take DRE 098  
Take EFL 111 EFL 112 with a minimum grade of C  
Take ENG 111 with a minimum grade of C  
Take ENG 112 with a minimum grade of C  
Take ENG 113 with a minimum grade of C  
Take ENG 114 with a minimum grade of C

**BUS 225. Business Finance. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0

This course provides an overview of business financial management. Emphasis is placed on financial statement analysis, time value of money, management of cash flow, risk and return, and sources of financing. Upon completion, students should be able to interpret and apply the principles of financial management.

Prerequisites: Take ACC 120 Minimum grade C

**BUS 228. Business Statistics. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0

This course introduces the use of statistical methods and tools in evaluating research data for business applications. Emphasis is placed on basic probability, measures of spread and dispersion, central tendency, sampling, regression analysis, and inductive inference. Upon completion, students should be able to apply statistical problem solving to business.

**BUS 230. Small Business Management. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course introduces the challenges of entrepreneurship including the startup and operation of a small business. Topics include market research techniques, feasibility studies, site analysis, financing alternatives, and managerial decision making. Upon completion, students should be able to develop a small business plan.

Prerequisites: Complete one of the following options:Take DRE 098  
Take EFL 111 EFL 112 with a minimum grade of C  
Take ENG 111 with a minimum grade of C  
Take ENG 112 with a minimum grade of C  
Take ENG 113 with a minimum grade of C  
Take ENG 114 with a minimum grade of C

**BUS 234. Training and Development. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course covers developing, conducting, and evaluating employee training with attention to adult learning principles. Emphasis is placed on conducting a needs assessment, using various instructional approaches, designing the learning environment, and locating learning resources. Upon completion, students should be able to design, conduct, and evaluate a training program.

Prerequisites: Complete one of the following options:Take DRE 098  
Take EFL 111 EFL 112 with a minimum grade of C  
Take ENG 111 with a minimum grade of C  
Take ENG 112 with a minimum grade of C  
Take ENG 113 with a minimum grade of C  
Take ENG 114 with a minimum grade of C

**BUS 240. Business Ethics. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course introduces contemporary and controversial ethical issues that face the business community. Topics include moral reasoning, moral dilemmas, law and morality, equity, justice and fairness, ethical standards, and moral development. Upon completion, students should be able to demonstrate an understanding of their moral responsibilities and obligations as members of the workforce and society.

Prerequisites: Take BUS 110 with a minimum grade of C  
Take ENG 111 or DRE 098

**BUS 253. Leadership and Management Skills. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course includes a study of the qualities, behaviors, and personal styles exhibited by leaders. Emphasis is placed on coaching, counseling, team building, and employee involvement. Upon completion, students should be able to identify and exhibit the behaviors needed for organizational effectiveness.

**BUS 255. Organizational Behavior in Business. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course covers the impact of different management practices and leadership styles on worker satisfaction and morale, organizational effectiveness, productivity, and profitability. Topics include a discussion of formal and informal organizations, group dynamics, motivation, and managing conflict and change. Upon completion, students should be able to analyze different types of interpersonal situations and determine an appropriate course of action.

Prerequisites: Take BUS 110 with a minimum grade of C

**BUS 256. Recruiting, Selection & Personnel Planning. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course introduces the basic principles involved in managing the employment process. Topics include personnel planning, recruiting, interviewing and screening techniques, maintaining employee records; and voluntary and involuntary separations. Upon completion, students should be able to acquire and retain employees who match position requirements and fulfill organizational objectives.

Prerequisites: Complete one of the following options:Take DRE 098  
Take EFL 111 EFL 112 with a minimum grade of C  
Take ENG 111 with a minimum grade of C  
Take ENG 112 with a minimum grade of C  
Take ENG 113 with a minimum grade of C  
Take ENG 114 with a minimum grade of C

**BUS 258. Compensation and Benefits. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course is designed to study the basic concepts of pay and its role in rewarding performance. Topics include wage and salary surveys, job analysis, job evaluation techniques, benefits, and pay-for-performance programs. Upon completion, students should be able to develop and manage a basic compensation system to attract, motivate, and retain employees.

Prerequisites: Complete one of the following options:Take DRE 098  
Take EFL 111 EFL 112 with a minimum grade of C  
Take ENG 111 with a minimum grade of C  
Take ENG 112 with a minimum grade of C  
Take ENG 113 with a minimum grade of C  
Take ENG 114 with a minimum grade of C

**BUS 259. Human Resource Management Applications. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course provides students in the Human Resource Management concentration the opportunity to reinforce their learning experiences from preceding HRM courses. Emphasis is placed on application of day-to-day HRM functions by completing in-basket exercises and through simulations. Upon completion, students should be able to determine the appropriate actions called for by typical events that affect the status of people at work. Prerequisites: Take All: BUS 217, BUS 234, BUS 256, and BUS 258

**BUS 260. Business Communication. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course is designed to develop skills in writing business communications. Emphasis is placed on business reports, correspondence, and professional presentations. Upon completion, students should be able to communicate effectively in the work place. This course is designed to develop skills in writing business communications. Emphasis is placed on business reports, correspondence, and professional presentations. Upon completion, students should be able to communicate effectively in the work place. Prerequisites: Take One: ENG 110 or ENG 111

## Cardiovascular Technology (Invasive) (ICT)

**ICT 110. Invasive Fundamentals. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0

This course provides information related to the profession and practice of invasive cardiovascular technology. Emphasis is placed on medical-legal and ethical aspects of healthcare, patient safety principles, basic invasive principles and cardiovascular imaging modalities. Upon completion, students should be able to demonstrate an understanding of basic invasive principles, cardiovascular imaging modalities, medical-legal and ethical aspects and safety practices.

Corequisites: Take All: ICT 113 and NCT 134

**ICT 113. Electrocardiography. 4.0 Credits.** Class-3.0. Clinical-0.0. Lab-2.0. Work-0.0

This course introduces the principles of electrocardiography, ECG rhythm recognition, methods of arrhythmia intervention and cardiac pacemaker therapy. Topics include rhythm strip and 12-lead analysis, identification of conduction abnormalities, and pharmacologic and electrical treatment methods. Upon completion, students should be able to describe electrical function, detect a variety of arrhythmias and describe their treatment methods and analyze 12-lead electrocardiograms.

Corequisites: Take One: ICT 110, NCT 110, or NCT 134

**ICT 136. Cardiac and Peripheral Vascular Invasive I. 6.0 Credits.** Class-3.0. Clinical-6.0. Lab-2.0. Work-0.0

This course provides an introduction to diagnostic techniques and equipment utilized in the invasive labs. Emphasis is placed on diagnostic cardiac and peripheral vascular catheterization principles, instrumentation, patient care techniques and the development of basic invasive lab skills. Upon completion, students should be able to identify cardiovascular anatomy through angiographic assessment, provide basic patient care and demonstrate basic invasive lab skills.

Prerequisites: Take All: ICT 110, ICT 113, and NCT 134

Corequisites: Take ICT 140

**ICT 140. Cardiovascular (CV) Hemodynamics I. 2.0 Credits.** Class-2.0. Clinical-0.0. Lab-0.0. Work-0.0

This course provides an introduction to the hemodynamic principles of the cardiac catheterization lab. Emphasis is placed on pressure acquisition, basic waveform analysis and hemodynamic calculations. Upon completion, students should be able to discuss the pressure acquisition process, identify cardiac pressures, determine valve conditions, and perform basic hemodynamic calculations.

Prerequisites: Take All: ICT 110, ICT 113, and NCT 134

Corequisites: Take ICT 136

**ICT 214. Cardiac and Peripheral Vascular Invasive II. 9.0 Credits.** Class-3.0. Clinical-15.0. Lab-2.0. Work-0.0

This course introduces the student to advanced diagnostic and interventional techniques and instrumentation used in invasive labs. Emphasis is placed on functional assessment, coronary interventional instrumentation, emergency treatments, and increasing clinical skills in clinical rotations. Upon completion, students should be able to describe peripheral vascular and coronary interventional techniques and demonstrate clinical skills with increased competency in the clinical setting.

Prerequisites: Take ICT 136 ICT 140 Minimum grade C

Corequisites: Take ICT 218

**ICT 218. Invasive Pharmacology. 2.0 Credits.** Class-2.0. Clinical-0.0. Lab-0.0. Work-0.0

This course introduces the student to the essential medications and medical therapies used in the invasive catheterization labs. Emphasis is placed on indications, contraindications, routes, dosages, and adverse effects of the primary and secondary medications used in cardiovascular labs. Upon completion, students should be able to identify indications, side effects, contraindications, dosages, complications, identify trade and generic names and perform medication calculations.

Prerequisites: Take All: ICT 136 and ICT 140

Corequisites: Take ICT 214

**ICT 234. Cardiac and Peripheral Vascular Invasive III. 13.0 Credits.** Class-3.0. Clinical-30.0. Lab-0.0. Work-0.0

This course introduces the student to advanced cardiac interventional techniques, peripheral vascular intervention techniques and increased clinical rotations. Emphasis is placed on identification of advanced disease states, structural heart and peripheral vascular interventional techniques, and increasing clinical skills in clinical rotations. Upon completion, students should be able to identify advanced diseased states, interventional techniques, and instrumentation and demonstrate entry level skills in the clinical setting.

Prerequisites: Take ICT 214

Corequisites: Take ICT 214 with a minimum grade of C

**ICT 236. Cardiovascular (CV) Hemodynamics II. 2.0 Credits.** Class-2.0. Clinical-0.0. Lab-0.0. Work-0.0

This course introduces students to advanced cardiac conditions and disease states found in the invasive lab environment. Emphasis is placed on identifying advanced cardiovascular conditions, performing advanced hemodynamic calculations, and identifying congenital malformations through hemodynamic pressures. Upon completion, students should be able to identify advanced cardiovascular conditions, perform hemodynamic calculations and identify congenital malformations through hemodynamic pressures.

Prerequisites: Take All: ICT 214 and ICT 218

Corequisites: Take ICT 234

## Cardiovascular Technology Non-Invasive (NCT)

**NCT 110. Echo Fundamentals. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0

This course provides information related to the profession and practice of echocardiography. Emphasis is placed on medical-legal and ethical aspects of healthcare, patient centered care, understanding basic echocardiography imaging views and cardiovascular imaging modalities. Upon completion, students should be able to demonstrate an understanding of basic echocardiography imaging views, cardiovascular imaging modalities, medical-ethical issues and patient care practices. Corequisites: Take All: ICT 113 and NCT 134

**NCT 133. Cardiovascular Ultrasound Principles. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course introduces the principles of ultrasound applications and instrumentation of cardiovascular imaging procedures. Emphasis is placed on the physical principles of cardiovascular imaging as a diagnostic tool, instrumentation and applicable effects, and biosafety issues. Upon completion, students should be able to discuss applications of ultrasound imaging, understand instrumentation applications and improve quality imaging while maintaining bioeffects standards.

Prerequisites: Take All: ICT 113, NCT 110, and NCT 134  
Corequisites: Take NCT 143

**NCT 134. Cardiovascular Anatomy and Physiology. 4.0 Credits.** Class-4.0. Clinical-0.0. Lab-0.0. Work-0.0

This course provides information related to cardiovascular anatomy and physiology. Emphasis is placed on the hemodynamics of pathophysiological disease states, embryology and the diagnosis and treatment of cardiovascular diseases. Upon completion, students should be able describe normal and abnormal cardiovascular diseases, associated hemodynamic findings, and treatment options.

Corequisites: Complete one of the following options:

- ICT 113 and ICT 110
- ICT 113 and NCT 110

**NCT 143. Echocardiography I. 6.0 Credits.** Class-3.0. Clinical-6.0. Lab-3.0. Work-0.0

This course introduces echocardiography procedures, cardiovascular imaging modalities and their applications in the diagnosis of cardiovascular diseases. Emphasis is placed on the diagnostic capabilities of echocardiography related to clinical presentations of cardiovascular diseases and development of basic imaging skills. Upon completion, students should be able to perform basic echocardiography/Doppler examinations and describe the diagnostic information obtained by noninvasive procedures.

Prerequisites: Take All: ICT 114 and ICT 134  
Corequisites: Take NCT 133

**NCT 251. Echocardiography II. 8.0 Credits.** Class-2.0. Clinical-15.0. Lab-2.0. Work-0.0

This course introduces advanced echocardiography/Doppler techniques, modalities, and hemodynamic assessments utilized for the diagnosis of acquired and congenital cardiovascular diseases. Emphasis is placed on protocols, interpretation of echocardiography/Doppler data with correlation to the clinical presentation of disease states in the clinical setting. Upon completion, students should be able to identify abnormal heart diseases through analysis and correlation of imaging data and demonstrate increasing clinical skill development.

Prerequisites: Take NCT 133 NCT 143 Minimum grade C,  
Corequisites: Take NCT 253

**NCT 253. Hemodynamic Echocardiographic Principles. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0

This course provides an introduction to the hemodynamic approach in performing an echocardiogram to detect cardiovascular heart disease. Emphasis is placed on the applications of hemodynamic calculations in valvular heart disease and development of quality standard practices for quality patient care outcomes. Upon completion, students should be able to perform hemodynamic calculations on an echocardiogram.

Prerequisites: Take NCT 133 NCT 143 Minimum grade C  
Corequisites: Take NCT 251

**NCT 273. Echocardiography III. 14.0 Credits.** Class-3.0. Clinical-30.0. Lab-2.0. Work-0.0

This course provides expanded techniques and applications required for a comprehensive echocardiography procedure. Emphasis is placed on interpretation of advanced qualitative and quantitative calculations of various heart diseases with increasing skill development in the clinical setting. Upon completion, students should be able to independently perform a comprehensive diagnostic echocardiography examination with relative quantitative calculations with entry level skill competency.

Prerequisites: Take All: NCT 251 and NCT 253

## Carpentry (CAR)

**CAR 110. Introduction to Carpentry. 2.0 Credits.** Class-2.0. Clinical-0.0. Lab-0.0. Work-0.0

This course introduces the student to the carpentry trade. Topics include duties of a carpenter, hand and power tools, building materials, construction methods, and safety. Upon completion, students should be able to identify hand and power tools, common building materials, and basic construction methods.

**CAR 114. Residential Building Codes. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course covers building codes and the requirements of state and local construction regulations. Emphasis is placed on the minimum requirements of the North Carolina building codes related to residential structures. Upon completion, students should be able to determine if a structure is in compliance with North Carolina building codes.

**CAR 140. Basic Carpentry. 4.0 Credits.** Class-2.0. Clinical-0.0. Lab-6.0. Work-0.0

This course covers the basic construction of wood structures, and installation, maintenance, and repair of the many components within these structures. Topics include safe use of tools, implementation of standard practices, appropriate use of materials, and installation/repair of components such as doors, windows, roofing, and siding. Upon completion, students should be able to construct, install/repair wooden structures and components using appropriate tools, materials and standard practices from the carpentry trade.

## Chemistry (CHM)

**CHM 115. Concepts in Chemistry. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course introduces basic chemical concepts and their applications to daily life for non-science majors. Topics include air pollution, global warming, energy, world of polymers, water and its importance to a technological society, food, drugs, and nuclear chemistry. Upon completion, students should be able to discuss, apply, and appreciate the impact of chemistry on modern society.

**CHM 115A. Concepts in Chemistry Lab. 1.0 Credit.** Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0

This course is a laboratory for CHM 115. Emphasis is placed on laboratory experiences that enhance materials presented in CHM 115. Upon completion, students should be able to utilize basic laboratory procedures and apply them to chemical concepts presented in CHM 115.  
Corequisites: Take CHM 115

**CHM 121A. Foundations of Chemistry Lab. 1.0 Credit.** Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0

This course is a laboratory for CHM 121. Emphasis is placed on laboratory experiences that enhance materials presented in CHM 121. Upon completion, students should be able to utilize basic laboratory procedures and apply them to chemical principles presented in CHM 121.  
Corequisites: Take CHM 121

**CHM 121. Foundations of Chemistry. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course is designed for those who have no previous high school chemistry or a grade of C or less in high school chemistry. Topics include matter, structure of the atom, nomenclature, chemical equations, bonding and reactions; mathematical topics include measurements, scientific notation, and stoichiometry. Upon completion, students should be able to demonstrate an understanding of chemical concepts and an ability to solve related problems in subsequent chemistry courses.

Prerequisites: Take DMA 010 DMA 020 DMA 030 DMA 040 DMA 050 DMA 060

Corequisites: Take CHM 121A

**CHM 130A. General, Organic, & Biochemistry Lab. 1.0 Credit.** Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0

This course is a laboratory for CHM 130. Emphasis is placed on laboratory experiences that enhance materials presented in CHM 130. Upon completion, students should be able to utilize basic laboratory procedures and apply them to chemical principles presented in CHM 130. Recommended for certain Allied Health programs.  
Corequisites: Take CHM 130

**CHM 130. General, Organic, & Biochemistry. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course provides a survey of basic facts and principles of general, organic, and biochemistry. Topics include measurement, molecular structure, nuclear chemistry, solutions, acid-base chemistry, gas laws, and the structure, properties, and reactions of major organic and biological groups. Upon completion, students should be able to demonstrate an understanding of fundamental chemical concepts. Recommended for certain Allied Health programs.

Prerequisites: Take DMA 010 DMA 020 DMA 030 DMA 040 DMA 050 DMA 060 DMA 070 DMA 080

Corequisites: Take CHM 130A

**CHM 131A. Introduction to Chemistry Lab. 1.0 Credit.** Class-0.0. Clinical-0.0. Lab-3.0. Work-0.0

This course is a laboratory to accompany CHM 131. Emphasis is placed on laboratory experiences that enhance materials presented in CHM 131. Upon completion, students should be able to utilize basic laboratory procedures and apply them to chemical principles presented in CHM 131.  
Corequisites: Take CHM 131

**CHM 131. Introduction to Chemistry. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course introduces the fundamental concepts of inorganic chemistry. Topics include measurement, matter and energy, atomic and molecular structure, nuclear chemistry, stoichiometry, chemical formulas and reactions, chemical bonding, gas laws, solutions, and acids and bases. Upon completion, students should be able to demonstrate a basic understanding of chemistry as it applies to other fields.

Prerequisites: Complete one of the following options:

- Take DMA 010 DMA 020 DMA 030 DMA 040 DMA 050 DMA 060 DMA 070 DMA 080
- Take CHM 121

Corequisites: Take CHM 131A

**CHM 132. Organic and Biochemistry. 4.0 Credits.** Class-3.0. Clinical-0.0. Lab-3.0. Work-0.0

This course provides a survey of major functional classes of compounds in organic and biochemistry. Topics include structure, properties, and reactions of the major organic and biological molecules and basic principles of metabolism. Upon completion, students should be able to demonstrate an understanding of fundamental chemical concepts needed to pursue studies in related professional fields. This course has been approved to satisfy the comprehensive articulation agreement general education core requirement in natural sciences/Mathematics.

Prerequisites: Complete one of the following options: Take CHM 131 CHM 131A with a minimum grade of C

Take CHM 151

**CHM 151. General Chemistry I. 4.0 Credits.** Class-3.0. Clinical-0.0. Lab-3.0. Work-0.0

This course covers fundamental principles and laws of chemistry. Topics include measurement, atomic and molecular structure, periodicity, chemical reactions, chemical bonding, stoichiometry, thermochemistry, gas laws, and solutions. Upon completion, students should be able to demonstrate an understanding of fundamental chemical laws and concepts as needed in CHM 152.

Prerequisites: Complete one of the following options: Take DMA 010 DMA 020 DMA 030 DMA 040 DMA 050 DMA 060 DMA 070 DMA 080

Take CHM 121

Take MAT 171 with a minimum grade of C

**CHM 152. General Chemistry II. 4.0 Credits.** Class-3.0. Clinical-0.0. Lab-3.0. Work-0.0

This course provides a continuation of the study of the fundamental principles and laws of chemistry. Topics include kinetics, equilibrium, ionic and redox equations, acid-base theory, electrochemistry, thermodynamics, introduction to nuclear and organic chemistry, and complex ions. Upon completion, students should be able to demonstrate an understanding of chemical concepts as needed to pursue further study in chemistry and related professional fields.

Prerequisites: Take CHM 151 Minimum grade C



**CHM 251. Organic Chemistry I. 4.0 Credits.** Class-3.0. Clinical-0.0. Lab-3.0. Work-0.0

This course provides a systematic study of the theories, principles, and techniques of organic chemistry. Topics include nomenclature, structure, properties, reactions, and mechanisms of hydrocarbons, alkyl halides, alcohols, and ethers; further topics include isomerization, stereochemistry, and spectroscopy. Upon completion, students should be able to demonstrate an understanding of the fundamental concepts of covered organic topics as needed in CHM 252.

Prerequisites: Take CHM 152

**CHM 252. Organic Chemistry II. 4.0 Credits.** Class-3.0. Clinical-0.0. Lab-3.0. Work-0.0

This course provides continuation of the systematic study of the theories, principles, and techniques of organic chemistry. Topics include nomenclature, structure, properties, reactions, and mechanisms of aromatics, aldehydes, ketones, carboxylic acids and derivatives, amines and heterocyclics; multi-step synthesis will be emphasized. Upon completion, students should be able to demonstrate an understanding of organic concepts as needed to pursue further study in chemistry and related professional fields.

Prerequisites: Take CHM 251 Minimum grade C

## Chemistry Concepts (CHM)

**CHM 090. Chemistry Concepts. 4.0 Credits.** Class-4.0. Clinical-0.0. Lab-0.0. Work-0.0

This course provides a non-laboratory based introduction to basic concepts of chemistry. Topics include measurements, matter, energy, atomic theory, bonding, molecular structure, nomenclature, balancing equations, stoichiometry, solutions, acids and bases, gases, and basic organic chemistry. Upon completion, students should be able to understand and apply basic chemical concepts necessary for success in college-level science courses.

## Civil Engineering (CIV)

**CIV 111. Soils and Foundations. 4.0 Credits.** Class-2.0. Clinical-0.0. Lab-4.0. Work-0.0

This course presents an overview of soil as a construction material using both analysis and testing procedures. Topics include index properties, classification, stress analysis, compressibility, compaction, dewatering, excavation, stabilization, settlement, and foundations. Upon completion, students should be able to perform basic soil tests and analyze engineering properties of soil. This course presents an overview of soil as a construction material using both analysis and testing procedures. Topics include index properties, classification, stress analysis, compressibility, compaction, dewatering, excavation, stabilization, settlement and foundations. Upon completion, students should be able to perform basis soil tests and analyze engineering properties of soil.

Prerequisites: Take One: EGR 250 or MEC 210 Minimum grade C

**CIV 125. Civil/Surveying CAD. 3.0 Credits.** Class-1.0. Clinical-0.0. Lab-6.0. Work-0.0

This course introduces civil/surveying computer-aided drafting (CAD) software. Topics include drawing, editing, and dimensioning commands; plotting; and other related civil/surveying topics. Upon completion, students should be able to produce civil/surveying drawings using CAD software.

Prerequisites: Take CEG 151

**CIV 221. Steel and Timber Design. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0

This course introduces the basic elements of steel and timber structures. Topics include strength of materials applications, the analysis and design of steel and timber beams, columns, and connections and concepts of structural detailing. Upon completion, students should be able to analyze, design, and draw simple plans using Computer Aided Drafting and Design software (CADD).

Prerequisites: Take One: EGR 250 or MEC 210

**CIV 222. Reinforced Concrete. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0

This course introduces the basic elements of reinforced concrete structures. Topics include analysis and design of reinforced concrete beams, slabs, columns, footings, and retaining walls. Upon completion, students should be able to analyze and design components of a structure using reinforced concrete and draw simple plans using Computer Aided Drafting and Design software (CADD).

Prerequisites: Take One: EGR 250 or MEC 210

**CIV 230. Construction Estimating. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0

This course covers quantity take-offs of labor, materials, and equipment and calculation of direct and overhead costs for a construction project. Topics include the interpretation of working drawings and specifications, types of contracts and estimates, building codes, bidding techniques and procedures, and estimating software. Upon completion, students should be able to prepare a detailed cost estimate and bid documents for a construction project.

Prerequisites: Take One: ARC 111, CIS 110, OR CIS 111

**CIV 250. Civil Engineering Technology Project. 2.0 Credits.** Class-1.0. Clinical-0.0. Lab-3.0. Work-0.0

This course includes an integrated team approach to civil engineering technology projects. Emphasis is placed on project proposal, site selection, analysis/design of structures, construction material selection, time and cost estimating, planning, and management of a project. Upon completion, students should be able to apply team concepts, prepare estimates, submit bid proposals, and manage projects.

## Civil Engineering and Geomatic (CEG)

**CEG 111. Introduction to Gis and Gnss. 4.0 Credits.** Class-2.0. Clinical-0.0. Lab-4.0. Work-0.0

This course introduces the methods and techniques used in the Geographic Information Systems (GIS) and Global Navigation Satellite Systems (GNSS) professions. Emphasis is placed on data collection and mapping using GIS software. Upon completion, students should be able to use GNSS technologies to collect field data and create GIS maps.

Prerequisites: Take CEG 115

**CEG 115. Intro to Tech & Sustainability. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0

This course introduces basic skills, sustainability concepts and career fields for technicians. Topics include career options, technical vocabulary, dimensional analysis, measurement systems, engineering graphics, professional ethics, and related topics. Upon completion, students should be able to identify drawing elements and create sketches, perform basic engineering computations and identify measures of sustainable development.

Corequisites: Take MAT 121 or MAT 171

**CEG 151. Cad for Engineering Technology. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0

This course introduces computer-aided drafting (CAD) software. Topics include file and data management, drawing, editing, dimensioning commands, plotting, and related topics. Upon completion, students should be able to create and plot basic drawings and maps using CAD software.

**CEG 210. Construction Materials & Methods. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0

This course covers the behavior and properties of Portland cement, asphaltic concretes, and other construction materials, including construction methods and equipment. Topics include cementing agents, aggregates, water and admixture materials with their proportions, production, placement, consolidation, curing; and their inspection. Upon completion, students should be able to proportion Portland concrete mixes to attain predetermined strengths, perform standard control tests on Portland cement concrete, identify inspection criteria for concretes, identify construction equipment and applications.

Prerequisites: Take EGR 250

**CEG 211. Hydrology & Erosion Control. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0

This course introduces basic engineering principles and characteristics of hydrology, erosion and sediment control. Topics include stormwater runoff, gravity pipe flow, open channel flow, low impact development (LID), erosion control devices and practices. Upon completion, students should be able to analyze and design gravitational drainage structures, identify LID and erosion control elements, and prepare a stormwater drainage plan.

Prerequisites: Complete one of the following options:

- DMA 060, DMA 070, and DMA 080
- DMA 065
- MAT 121
- MAT 171
- MAT 003
- BSP 4003

**CEG 212. Introduction to Environmental Technology. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0

This course introduces basic engineering principles of hydraulics, and water and wastewater technologies. Topics include fluid statics, fluid dynamics, flow measurement, the collection, treatment, and distribution of water and wastewater. Upon completion, students should be able to identify water and wastewater system elements, describe water and wastewater system processes and perform basic hydraulics and treatment computations.

Prerequisites: Take Each Group: Take CEG 211 Take EGR 250 or MEC 210

**CEG 230. Subdivision Planning & Design. 3.0 Credits.** Class-1.0. Clinical-0.0. Lab-6.0. Work-0.0

This course covers the planning and design concepts related to subdivisions including analysis of development standards, engineering, and the creation of CAD drawings. Topics include applicable codes, lot creation, roadway system layout, stormwater drainage, low impact development (LID) concepts, and related topics. Upon completion, students should be able to prepare a set of subdivision plans.

Prerequisites: Take Each Group: Take CEG 151, DFT 151, or EGR 120 Take

CEG 211 Take SRV 111

**CEG 235. Project Management and Estimating. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0

This course covers planning and estimating practices which are applicable to the civil engineering and related construction industries. Emphasis is placed on construction project planning and management, material take-offs labor and equipment requirements in accordance with industry formats, and other economic topics. Upon completion, students should be able to accurately complete material take-offs, prepare cost estimates, and prepare construction schedules.

Prerequisites: Take One: Take CEG 115, CIS 110, CIS 111, or EGR 125

## Communication (COM)

**COM 110. Introduction to Communication. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course provides an overview of the basic concepts of communication and the skills necessary to communicate in various contexts. Emphasis is placed on communication theories and techniques used in interpersonal group, public, intercultural, and mass communication situations. Upon completion, students should be able to explain and illustrate the forms and purposes of human communication in a variety of contexts. Students may be required to prepare and deliver oral reports in public contexts.

Prerequisites: Complete one of the following options: Take DRE 098

Take EFL 111 EFL 112 with a minimum grade of C

Take ENG 111 with a minimum grade of C

Take ENG 112 with a minimum grade of C

Take ENG 113 with a minimum grade of C

Take ENG 114 with a minimum grade of C

**COM 111. Voice and Diction I. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course provides guided practice in the proper production of speech. Emphasis is placed on improving speech, including breathing, articulation, pronunciation, and other vocal variables. Upon completion, students should be able to demonstrate effective natural speech in various contexts. Students will analyze regional and international speech differences and standards.

**COM 120. Intro to Interpersonal Communication. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course introduces the practices and principles of interpersonal communication in both dyadic and group settings. Emphasis is placed on the communication process, perception, listening, self-disclosure, speech apprehension, ethics, nonverbal communication, conflict, power, and dysfunctional communication relationships. Upon completion, students should be able to demonstrate interpersonal communication skills, apply basic principles of group discussion, and manage conflict in interpersonal communication situations.

Prerequisites: Complete one of the following options: Take DRE 098

Take EFL 111 EFL 112 with a minimum grade of C

Take ENG 111 with a minimum grade of C

Take ENG 112 with a minimum grade of C

Take ENG 113 with a minimum grade of C

Take ENG 114 with a minimum grade of C

**COM 130. Nonverbal Communication. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course introduces the contemporary study of nonverbal communication in daily life. Topics include haptics, kinesics, proxemics, facial displays, and appearance. Upon completion, students should be able to analyze/interpret nonverbal communication and demonstrate greater awareness of their own nonverbal communication habits.

Prerequisites: Take COM 110 or COM 120 Minimum grade C

**COM 140. Introduction to Intercultural Communication. 3.0 Credits.**

Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course introduces techniques of cultural research, definitions, functions, characteristics, and impacts of cultural differences in public address. Emphasis is placed on how diverse backgrounds influence the communication act and how cultural perceptions and experiences determine how one sends and receives messages. Upon completion, students should be able to demonstrate an understanding of the principles and skills needed to become effective in communicating outside one's primary culture.

Prerequisites: Complete one of the following options: Take DRE 098

Take EFL 111 EFL 112 with a minimum grade of C

Take ENG 111 with a minimum grade of C

**COM 150. Introduction to Mass Communication. 3.0 Credits.**

Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course introduces print and electronic media and the new information technologies in terms of communication theory and as economic, political, and social institutions. Topics include the nature, history, functions, and responsibilities of mass communication industries in a global environment and their role and impact in American society. Upon completion, students should be able to demonstrate awareness of the pervasive nature of mass media and how media operate in an advanced post-industrial society.

Prerequisites: Take ENG 111 Minimum grade C

**COM 231. Public Speaking. 3.0 Credits.**

Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course provides instruction and experience in preparation and delivery of speeches within a public setting and group discussion. Emphasis is placed on research, preparation, delivery, and evaluation of informative, persuasive, and special occasion public speaking. Upon completion, students should be able to prepare and deliver well-organized speeches and participate in group discussion with appropriate audiovisual support.

Prerequisites: Complete one of the following options: Take DRE 098

Take EFL 111 EFL 112 with a minimum grade of C

Take ENG 111 with a minimum grade of C

Take ENG 112 with a minimum grade of C

Take ENG 113 with a minimum grade of C

Take ENG 114 with a minimum grade of C

## Computer Information Technology (CTS)

**CTS 112. Windows (TM). 2.0 Credits.**

Class-1.0. Clinical-0.0. Lab-2.0. Work-0.0

This course includes the fundamentals of the Windows(TM) software. Topics include graphical user interface, icons, directories, file management, accessories, and other applications. Upon completion, students should be able to use Windows(TM) software in an office environment.

**CTS 115. Information Systems Business Concepts. 3.0 Credits.**

Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

The course introduces the role of IT in managing business processes and the need for business process and IT alignment. Emphasis is placed on industry need for understanding business challenges and developing/managing information systems to contribute to the decision making process based on these challenges. Upon completion, students should be able to demonstrate knowledge of the 'hybrid business manager' and the potential offered by new technology and systems.

**CTS 118. Is Professional Communications. 2.0 Credits.**

Class-2.0. Clinical-0.0. Lab-0.0. Work-0.0

This course prepares the information systems professional to communicate with corporate personnel from management to end-users. Topics include information systems cost justification tools, awareness of personal hierarchy of needs, addressing these needs, and discussing technical issues with non-technical personnel. Upon completion, students should be able to communicate information systems issues to technical and non-technical personnel.

Prerequisites: Take EFL 112 ENG 111 ENG 112 ENG 113 or ENG 114

Minimum grade C

**CTS 130. Spreadsheet. 3.0 Credits.**

Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0

This course introduces basic spreadsheet design and development. Topics include writing formulas, using functions, enhancing spreadsheets, creating charts, and printing. Upon completion, students should be able to design and print basic spreadsheets and charts.

Prerequisites: Take CIS 110 Minimum grade C

**CTS 225. Spreadsheet Data Analysis. 3.0 Credits.**

Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0

This course presents basic and advanced techniques for data analysis and management using electronic spreadsheets. Topics include an overview of spreadsheet analytics, terminology, model preparation, and analytical techniques. Upon completion, students should be able to develop reliable and effective quantitative data models and reports to support analysis and decision-making for common business systems.

Prerequisites: Take CTS 130 CTS 230 Minimum grade C

**CTS 230. Advanced Spreadsheet. 3.0 Credits.**

Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0

This course covers advanced spreadsheet design and development. Topics include advanced functions and statistics, charting, macros, databases, and linking. Upon completion, students should be able to demonstrate competence in designing complex spreadsheets.

Prerequisites: Take CTS 130 Minimum grade C

**CTS 240. Project Management. 3.0 Credits.**

Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0

This course introduces computerized project management software. Topics include identifying critical paths, cost management, and problem solving. Upon completion, students should be able to plan a complete project and project time and costs accurately.

Prerequisites: Take CIS 110 Minimum grade C

## Computer Science (CSC)

**CSC 119. Programming Orientation. 2.0 Credits.**

Class-1.0. Clinical-0.0. Lab-2.0. Work-0.0

This course provides students with an opportunity to develop the knowledge and skills required to succeed in the programming program. Emphasis is placed on introducing students to the tools and resources available to them in programming. Upon completion, students should be able to demonstrate knowledge of programming tools, resources, and services available.

**CSC 120. Computing Fundamentals I. 4.0 Credits.** Class-3.0. Clinical-0.0. Lab-2.0. Work-0.0

This course provides the essential foundation for the discipline of computing and a program of study in computer science, including the role of the professional. Topics include algorithm design, data abstraction, searching and sorting algorithms, and procedural programming techniques. Upon completion, students should be able to solve problems, develop algorithms, specify data types, perform sorts and searches, and use an operating system.

Prerequisites: Complete one of the following options: Take DMA 010, DMA 020, DMA 030, DMA 040, and DMA 050

Take MAT 121 with a minimum grade of C

Take MAT 171 with a minimum grade of C

**CSC 121. Python Programming. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0

This course introduces computer programming using the Python programming language. Emphasis is placed on common algorithms and programming principles utilizing the standard library distributed with Python. Upon completion, students should be able to design, code, test, and debug Python language programs.

**CSC 122. Python Application Development. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0

This course introduces the use of frameworks to build web-enabled applications. Emphasis is placed on URL routing, output format templating, database manipulation and security. Upon completion, students should be able to create simple web-enabled applications with a graphical user interface using the Python language.

**CSC 124. Introduction to Data Science Programming. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0

This course covers the key technologies used to manipulate, store and analyze big data. Topics include scripting languages, noSQL databases, database scalability, performance metrics and tuning. Upon completion, students should be able to use programming techniques to investigate data sets and algorithms.

**CSC 130. Computing Fundamentals II. 4.0 Credits.** Class-3.0. Clinical-0.0. Lab-2.0. Work-0.0

This course provides in-depth coverage of the discipline of computing and the role of the professional. Topics include software design methodologies, analysis of algorithm and data structures, searching and sorting algorithms, and file organization methods. Upon completion, students should be able to use software design methodologies and choice of data structures and understand social/ethical responsibilities of the computing professional.

Prerequisites: Take CSC 120

**CSC 133. C Programming. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0

This course introduces computer programming using the C programming language with structured programming principles. Topics include input/output operations, iteration, arithmetic operations, arrays, pointers, filters, and other related topics. Upon completion, students should be able to design, code, test and debug at a beginning level.

**CSC 134. C++ Programming. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0

This course introduces computer programming using the C++ programming language with object-oriented programming principles. Emphasis is placed on event-driven programming methods, including creating and manipulating objects, classes, and using object-oriented tools such as the class debugger. Upon completion, students should be able to design, code, test and debug at a beginning level.

Prerequisites: Take DRE 098 or ENG 111 with a minimum grade of C

**CSC 139. Visual BASIC Programming. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0

This course introduces computer programming using the Visual BASIC programming language with object-oriented programming principles. Emphasis is placed on event-driven programming methods, including creating and manipulating objects, classes, and using object-oriented tools such as the class debugger. Upon completion, students should be able to design, code, test and debug at a beginning level.

**CSC 141. Visual C++ Programming. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0

This course introduces computer programming using the Visual C++ programming language with object-oriented programming principles. Emphasis is placed on event-driven programming methods, including creating and manipulating objects, classes, and using object-oriented tools such as the class debugger. Upon completion, students should be able to design, code, test, debug, and implement objects using the appropriate environment at a beginning level.

**CSC 143. Object-Oriented Programming. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0

This course introduces the concepts of object-oriented programming. Emphasis is placed on event-driven programming methods, including creating and manipulating objects, classes, and using object-oriented tools such as the class debugger. Upon completion, students should be able to design, test, debug, and implement objects at the application level using the appropriate environment.

Prerequisites: Take EFL 112 ENG 111 ENG 112 ENG 113 or ENG 114 Minimum grade C

**CSC 151. JAVA Programming. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0

This course introduces computer programming using the JAVA programming language with object-oriented programming principles. Emphasis is placed on event-driven programming methods, including creating and manipulating objects, classes, and using object-oriented tools such as the class debugger. Upon completion students should be able to design, code, test, debug JAVA language programs.

Prerequisites: Take both groups: ENG 111 or DRE 098 with a minimum grade C CSC 120 or CSC 143 with a minimum grade B

**CSC 152. SAS. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0

This course introduces the fundamentals of SAS programming. Emphasis is placed on learning basic SAS commands and statements for solving a variety of data processing applications. Upon completion, students should be able to use SAS data and procedure steps to create SAS data sets, do statistical analysis, and general customized reports.

Prerequisites: Take CIS 115 CSC 119 CSC 120 or CSC 143 Minimum grade C



**CSC 153. C# Programming. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0

This course introduces computer programming using the C# programming language with object-oriented programming principles. Emphasis is placed on event-driven programming methods, including creating and manipulating objects, classes, and using object-oriented tools such as the class debugger. Upon completion, students should be able to design, code, test, debug, and implement objects using the appropriate environment at the beginning level.

Prerequisites: Take DRE 098 or ENG 111 with a minimum grade of C  
Take CSC 143 with a minimum grade of C

**CSC 154. Software Development. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0

This course covers the fundamentals of software development. Emphasis is placed on the full spectrum of team software development methodologies, software development project management, version control, issue tracking, regression testing, automated build and deployment. Upon completion, students should be able to work in a team environment and apply software development methodologies and software quality assurance principles.

**CSC 174. Server-Side Javascript. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0

This course introduces the use of JavaScript in the server environment to build server-side applications. Topics include asynchronous programming, connecting to other machines, testing, and connecting to different databases. Upon completion, students should be able to create server-side applications using JavaScript applications.

Prerequisites: Take CSC 143 WEB 110 Minimum grade C

**CSC 193. Selected Topics in Information Systems. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-4.0. Work-0.0

**CSC 234. Advanced C++ Programming. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0

This course is a continuation of CSC 134 using the C++ programming language with standard programming principles. Emphasis is placed on advanced arrays/tables, file management/processing techniques, data structures, sub-programs, interactive processing, sort/merge routines, and libraries. Upon completion, students should be able to design, code, test, debug and document programming solutions.

Prerequisites: Take CSC 134

**CSC 241. Advanced Visual C++ Programming. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0

This course is a continuation of CSC 141 using the Visual C++ programming language with object-oriented programming principles. Emphasis is placed on event-driven programming methods, including creating and manipulating objects, classes, and using object-oriented tools such as the class debugger. Upon completion, students should be able to design, code, test, debug, and implement objects using the appropriate environment.

Prerequisites: Take CSC 141

**CSC 249. Data Structure & Algorithms. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0

This course introduces the data structures and algorithms frequently used in programming applications. Topics include lists, stacks, queues, dequeues, heaps, sorting, searching, mathematical operations, recursion, encryption, random numbers, algorithm testing, and standards. Upon completion, students should be able to design data structures and implement algorithms to solve various problems.

Prerequisites: Take CSC 151 Minimum grade B

**CSC 251. Advanced JAVA Programming. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0

This course is a continuation of CSC 151 using the JAVA programming language with object-oriented programming principles. Emphasis is placed on event-driven programming methods, including creating and manipulating objects, classes, and using object-oriented tools such as the class debugger. Upon completion, students should be able to design, code, test, debug, and implement objects using the appropriate environment.

Prerequisites: Take CSC 151 Minimum grade B

**CSC 253. Advanced C# Programming. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0

This course is a continuation of CSC 153 using the C# programming language with object-oriented programming principles. Emphasis is placed on event-driven programming methods, including creating and manipulating objects, classes, and using object-oriented tools such as the class debugger. Upon completion, students should be able to design, code, test, debug, and implement objects using the appropriate environment.

Prerequisites: Take CSC 153

**CSC 256. Software Quality Assurance. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0

This course covers the principles, concepts and processes of software testing. Topics include testing technologies, static techniques, test design techniques, and test management. Upon completion, students should be able to design and implement software testing plans and procedures throughout the software life cycle.

Prerequisites: Take CSC 151 Minimum grade B

**CSC 284. Emerging Computer Prog Technologies. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0

This course provides students with the latest technologies and strategies in the field of Computer Programming. Emphasis is placed on the evaluation of developing Computer Programming Technologies and presenting those findings to the class. Upon completion, students should be able to critically analyze emerging Computer Programming Technologies and establish informed opinions.

Prerequisites: Take CSC 151 Minimum grade B

**CSC 289. Programming Capstone Project. 3.0 Credits.** Class-1.0. Clinical-0.0. Lab-4.0. Work-0.0

This course provides an opportunity to complete a significant programming project from the design phase through implementation with minimal instructor support. Emphasis is placed on project definition, testing, presentation, and implementation. Upon completion, students should be able to complete a project from the definition phase through implementation.

Prerequisites: Take All: CTI 110, CTI 120, and CTS 115

## Computer Tech Integration (CTI)

**CTI 110. Web, Programming, and Database Foundation. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0

This course covers the introduction of the tools and resources available to students in programming, mark-up language and services on the Internet. Topics include standard mark-up language Internet services, creating web pages, using search engines, file transfer programs; and database design and creation with DBMS products. Upon completion students should be able to demonstrate knowledge of programming tools, deploy a web-site with mark-up tools, and create a simple database table.

**CTI 120. Network and Security Foundation. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0

This course introduces students to the Network concepts, including networking terminology and protocols, local and wide area networks, and network standards. Emphasis is placed on securing information systems and the various implementation policies. Upon completion, students should be able to perform basic tasks related to networking mathematics, terminology, media and protocols.

**CTI 130. Operating Systems and Device Foundation. 6.0 Credits.** Class-4.0. Clinical-0.0. Lab-4.0. Work-0.0

This course covers the basic hardware and software of a personal computer, including installation, operations and interaction with popular microcomputer operating systems. Topics include components identification, memory-system, peripheral installation and configuration, preventive maintenance, hardware diagnostics/repair, installation and optimization of system software, commercial programs, system configuration, and device-drivers. Upon completion, students should be able to select appropriate computer equipment and software, upgrade/maintain existing equipment and software, and troubleshoot/repair non-functioning personal computers.

**CTI 140. Virtualization Concepts. 3.0 Credits.** Class-1.0. Clinical-0.0. Lab-4.0. Work-0.0

This course introduces operating system virtualization. Emphasis is placed on virtualization terminology, virtual machine storage, virtual networking and access control. Upon completion, students should be able to perform tasks related to installation, configuration and management of virtual machines.

**CTI 141. Cloud and Storage Concepts. 3.0 Credits.** Class-1.0. Clinical-0.0. Lab-4.0. Work-0.0

This course introduces cloud computing and storage concepts. Emphasis is placed on cloud terminology, virtualization, storage networking and access control. Upon completion, students should be able to perform tasks related to installation, configuration and management of cloud storage systems.

Prerequisites: Take CTI 140 Minimum grade C

**CTI 240. Virtualization Administration I. 3.0 Credits.** Class-1.0. Clinical-0.0. Lab-4.0. Work-0.0

This course covers datacenter virtualization concepts. Topics include data storage, virtual network configuration, virtual machine and virtual application deployment. Upon completion, students should be able to perform tasks related to virtual machine and hypervisor installation and configuration.

Prerequisites: Take CTI 141 Minimum grade C

**CTI 241. Virtualization Administration II. 3.0 Credits.** Class-1.0. Clinical-0.0. Lab-4.0. Work-0.0

This course covers administration of datacenter virtualization infrastructure. Topics include access control, fault tolerance, scalability, resource management, virtual machine migration and troubleshooting. Upon completion, students should be able to perform tasks related to virtualization security, data protection and resource monitoring.

**CTI 260. Data Center Troubleshooting. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0

This course covers troubleshooting in a highly available, high performance, storage and computing system. Topics include provisioning, monitoring, diagnosing, and taking corrective actions in storage environments relating to Storage Area Network (SAN), Network Attached Storage (NAS), data protection and recovery. Upon completion, students should be able to demonstrate an understanding of SAN and NAS technologies, topologies, configuration, data protection, and fault triage and remediation.

Prerequisites: Take CTI 241 Minimum grade C

**CTI 270. Data Center Design and Problem Resolution. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0

This course provides students an opportunity to complete a significant data center hardware and software design and configuration project, including disaster recovery planning. Emphasis is placed on adhering to optimal practices that can provide a highly available, stable, manageable, secure and scalable environment and maintaining it using a variety of utilities and system tools. Upon completion, students should be able to design, deploy and administer the hardware and software components of a highly available data center.

Prerequisites: Take CTI 260 Minimum grade C

**CTI 289. Computer Technology Integration Capstone Project. 3.0 Credits.** Class-1.0. Clinical-0.0. Lab-6.0. Work-0.0

This course provides students an opportunity to complete a significant integrated technology project from the design phase through implementation with minimal instructor support. Emphasis is placed on technology policy, process planning, procedure definition, systems architecture, and security issues to create projects for the many areas in which computer technology is integrated. Upon completion, students should be able to create, implement, and support a comprehensive technology integration project from the planning and design phase through implementation.

Prerequisites: Take CTI 110 CTI 120 CTS 115 Minimum grade C

## Construction (CST)

**CST 110. Intro to Construction. 2.0 Credits.** Class-1.0. Clinical-0.0. Lab-2.0. Work-0.0

This course introduces construction terminology, materials, and practices found at a construction worksite. Emphasis is placed on common and innovative practices, methods, materials, and other related topics of the construction industry. Upon completion, students should be able to successfully identify various practices, methods, and materials used in the construction industry.

**CST 111. Construction I. 4.0 Credits.** Class-3.0. Clinical-0.0. Lab-3.0. Work-0.0

This course covers standard and alternative building methods to include wall framing. Topics include safety and footings, foundations, floor framing systems, and wall framing systems commonly used in the construction industry. Upon completion, students should be able to safely erect all framing necessary to begin roof framing.

Prerequisites: Take WOL 110 Minimum grade C

**CST 150. Building Science. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0

This course introduces concepts and techniques for the design and interaction of the mechanical systems of high performance buildings. Topics include building envelope, heating, ventilation and air conditioning (HVAC), indoor air quality, lighting, plumbing and electrical. Upon completion, students should be able to understand building systems interaction and performance.

**CST 241. Planning/Estimating I. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0

This course covers the procedures involved in planning and estimating a construction/building project. Topics include performing quantity take-offs of materials necessary for a building project. Upon completion, students should be able to accurately complete a take-off of materials and equipment needs involved in a construction project.

Prerequisites: Take One: BPR 130, MAT 121, or MAT 171

**CST 242. Planning/Estimating II. 4.0 Credits.** Class-3.0. Clinical-0.0. Lab-2.0. Work-0.0

This course covers planning and estimating practices which are applicable to commercial construction. Emphasis is placed on planning and developing take-offs of materials, labor, and equipment in accordance with industry formats. Upon completion, students should be able to accurately complete take-offs and planning time lines necessary to complete a commercial structure.

Prerequisites: Take CST 241

## Construction Management (CMT)

**CMT 120. Codes and Inspections. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course covers building codes and the code inspections process used in the design and construction of residential and commercial buildings. Emphasis is placed on commercial, residential, and accessibility (ADA) building codes. Upon completion, students should understand the building code inspections process and apply building code principals and requirements to construction projects.

**CMT 210. Construction Management Fundamentals. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course introduces the student to the fundamentals of effective supervision emphasizing professionalism through knowledge and applied skills. Topics include safety, planning and scheduling, contracts, problem-solving, communications, conflict resolution, recruitment, employment laws and regulations, leadership, motivation, teamwork, discipline, setting objectives, and training. Upon completion, students should be able to demonstrate the basic skills necessary to be successful as a supervisor in the construction industry.

**CMT 212. Total Safety Performance. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course covers the importance of managing safety and productivity equally by encouraging people to take individual responsibility for safety and health in the workplace. Topics include safety management, controlling construction hazards, communicating and enforcing policies, OSHA compliance, personal responsibility and accountability, safety planning, training, and personal protective equipment. Upon completion, the student should be able to properly supervise safety at a construction jobsite and qualify for OSHA Training Certification.

Corequisites: Take CMT 210

**CMT 214. Planning and Scheduling. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course covers the need for and the process of planning construction projects, as well as the mechanics and vocabulary of project scheduling. Topics include project preplanning, scheduling formats, planning for production, short interval planning, schedule updating and revising, and computer-based planning and scheduling. Upon completion, the student should be able to understand the need for planning and scheduling, the language and logic of scheduling, and use of planning skills.

Prerequisites: Take All: CMT 210 and BPR 130

**CMT 216. Costs and Productivity. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course covers the relationships between time, work completed, work-hours spent, schedule duration, equipment hours, and materials used. Topics include production rates, productivity unit rates, work method improvements, and overall total project cost control. Upon completion, the student should be able to demonstrate an understanding of how costs may be controlled and productivity improved on a construction project.

Prerequisites: Take CMT 210

**CMT 218. Human Relations Issues. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course provides instruction on human relations issues as they relate to construction project supervision. Topics include relationships, human behavior, project staffing issues, teamwork, effective communication networks, laws and regulations, and identifying and responding to conflict, crisis, and discipline. Upon completion, the student will demonstrate an understanding of the importance of human relations in the success of a construction project.

Prerequisites: Take CMT 210

**CMT 226. Applications Project. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0

This course provides an individual and/or integrated team approach to a practical construction management project. Topics include project selection, research and planning, implementation, and a final presentation. Upon completion, students should be able to plan and implement an applications-oriented construction management project.

## Cosmetology (COS)

**COS 111AB. Cosmetology Concepts I. 2.0 Credits.** Class-2.0. Clinical-0.0. Lab-0.0. Work-0.0

This course introduces basic cosmetology concepts. Topics include safety, first aid, sanitation, bacteriology, anatomy, diseases and disorders, hygiene, product knowledge, chemistry, ethics, manicures, and other related topics. Upon completion, students should be able to safely and competently apply cosmetology concepts in the salon setting.

Corequisites: Take COS 112AB

**COS 111BB. Cosmetology Concepts I. 2.0 Credits.** Class-2.0. Clinical-0.0. Lab-0.0. Work-0.0

This course introduces basic cosmetology concepts. Topics include safety, first aid, sanitation, bacteriology, anatomy, diseases and disorders, hygiene, product knowledge, chemistry, ethics, manicures, and other related topics. Upon completion, students should be able to safely and competently apply cosmetology concepts in the salon setting.

Corequisites: Take COS 111AB

**COS 111. Cosmetology Concepts I. 4.0 Credits.** Class-4.0. Clinical-0.0. Lab-0.0. Work-0.0

This course introduces basic cosmetology concepts. Topics include safety, first aid, sanitation, bacteriology, anatomy, diseases and disorders, hygiene, product knowledge, chemistry, ethics, manicures, and other related topics. Upon completion, students should be able to safely and competently apply cosmetology concepts in the salon setting.

Corequisites: Take COS 112

**COS 112AB. Salon I. 4.0 Credits.** Class-0.0. Clinical-0.0. Lab-12.0. Work-0.0

This course introduces basic salon services. Topics include scalp treatments, shampooing, rinsing, hair color, design, haircutting, permanent waving, pressing, relaxing, wigs, and other related topics. Upon completion, students should be able to safely and competently demonstrate salon services.

Corequisites: Take COS 111AB

**COS 112BB. Salon I. 4.0 Credits.** Class-0.0. Clinical-0.0. Lab-12.0. Work-0.0

This course introduces basic salon services. Topics include scalp treatments, shampooing, rinsing, hair color, design, haircutting, permanent waving, pressing, relaxing, wigs, and other related topics. Upon completion, students should be able to safely and competently demonstrate salon services.

Corequisites: Take COS 112AB

**COS 112. Salon I. 8.0 Credits.** Class-0.0. Clinical-0.0. Lab-24.0. Work-0.0

This course introduces basic salon services. Topics include scalp treatments, shampooing, rinsing, hair color, design, haircutting, permanent waving, pressing, relaxing, wigs, and other related topics. Upon completion, students should be able to safely and competently demonstrate salon services.

Corequisites: Take COS 111

**COS 113. Cosmetology Concepts II. 4.0 Credits.** Class-4.0. Clinical-0.0. Lab-0.0. Work-0.0

This course covers more comprehensive cosmetology concepts. Topics include safety, product knowledge, chemistry, manicuring, chemical restructuring, and hair coloring. Upon completion, students should be able to safely and competently apply these cosmetology concepts in the salon setting.

Prerequisites: Take All: COS 111 and COS 112

**COS 114. Salon II. 8.0 Credits.** Class-0.0. Clinical-0.0. Lab-24.0. Work-0.0

This course provides experience in a simulated salon setting. Topics include basic skin care, manicuring, nail application, scalp treatments, shampooing, rinsing, hair color, design, haircutting, chemical restructuring, pressing, wigs, and other related topics. Upon completion, students should be able to safely and competently demonstrate these salon services.

Prerequisites: Take All: COS 111 and COS 112

**COS 115. Cosmetology Concepts III. 4.0 Credits.** Class-4.0. Clinical-0.0. Lab-0.0. Work-0.0

This course covers more comprehensive cosmetology concepts. Topics include safety, product knowledge, salon management, salesmanship, skin care, electricity/light therapy, wigs, thermal hair styling, lash and brow tinting, superfluous hair removal, and other related topics. Upon completion, students should be able to safely and competently apply these cosmetology concepts in the salon setting.

Prerequisites: Take All: COS 111 and COS 112

**COS 116. Salon III. 4.0 Credits.** Class-0.0. Clinical-0.0. Lab-12.0. Work-0.0

This course provides comprehensive experience in a simulated salon setting. Emphasis is placed on intermediate-level of skin care, manicuring, scalp treatments, shampooing, hair color, design, haircutting, chemical restructuring, pressing, and other related topics. Upon completion, students should be able to safely and competently demonstrate these salon services.

Prerequisites: Take All: COS 111 and COS 112

**COS 117. Cosmetology Concepts IV. 2.0 Credits.** Class-2.0. Clinical-0.0. Lab-0.0. Work-0.0

This course covers advanced cosmetology concepts. Topics include chemistry and hair structure, advanced cutting and design, and an overview of all cosmetology concepts in preparation for the licensing examination. Upon completion, students should be able to demonstrate an understanding of these cosmetology concepts and meet program completion requirements.

Prerequisites: Take All: COS 111 and COS 112

**COS 118. Salon IV. 7.0 Credits.** Class-0.0. Clinical-0.0. Lab-21.0. Work-0.0

This course provides advanced experience in a simulated salon setting. Emphasis is placed on efficient and competent delivery of all salon services in preparation for the licensing examination and employment. Upon completion, students should be able to demonstrate competence in program requirements and the areas covered on the Cosmetology Licensing Examination and meet entry-level employment requirements.

Prerequisites: Take All: COS 111 and COS 112

**COS 223. Contemp Hair Coloring. 2.0 Credits.** Class-1.0. Clinical-0.0. Lab-3.0. Work-0.0

This course covers basic color concepts, hair coloring problems, and application techniques. Topics include color theory, terminology, contemporary techniques, product knowledge, and other related topics. Upon completion, students should be able to identify a clients color needs and safely and competently perform color applications and correct problems.

Prerequisites: Take All: COS 111 and COS 112

**COS 240. Contemporary Design. 2.0 Credits.** Class-1.0. Clinical-0.0. Lab-3.0. Work-0.0

This course covers methods and techniques for contemporary designs. Emphasis is placed on contemporary designs and other related topics. Upon completion, students should be able to demonstrate and apply techniques associated with contemporary design.

Prerequisites: Take All: COS 111 and COS 112

**COS 271. Instructor Concepts I. 5.0 Credits.** Class-5.0. Clinical-0.0. Lab-0.0. Work-0.0

This course introduces the basic cosmetology instructional concepts. Topics include orientation, theories of education, unit planning, daily lesson planning, laboratory management, student assessment, record keeping, and other related topics. Upon completion, students should be able to identify theories of education, develop lesson plans, demonstrate supervisory techniques, and assess student performance in a classroom setting.

Corequisites: Take COS 272



**COS 272. Instructor Practicum I. 7.0 Credits.** Class-0.0. Clinical-0.0. Lab-21.0. Work-0.0

This course covers supervisory and instructional skills for teaching entry-level cosmetology students in a laboratory setting. Topics include demonstrations of services, supervision, and entry-level student assessment. Upon completion, students should be able to demonstrate salon services and instruct and objectively assess the entry-level student. Corequisites: Take COS 271

**COS 273. Instructor Concepts II. 5.0 Credits.** Class-5.0. Clinical-0.0. Lab-0.0. Work-0.0

This course covers advanced cosmetology instructional concepts. Topics include practical demonstrations, lesson planning, lecture techniques, development and administration of assessment tools, record keeping, and other related topics. Upon completion, students should be able to develop lesson plans, demonstrate supervision techniques, assess student performance in a classroom setting, and keep accurate records. Prerequisites: Take All: COS 271 and COS 272  
Corequisites: Take COS 274

**COS 274. Instructor Practicum II. 7.0 Credits.** Class-0.0. Clinical-0.0. Lab-21.0. Work-0.0

This course is designed to develop supervisory and instructional skills for teaching advanced cosmetology students in a laboratory setting. Topics include practical demonstrations, supervision, and advanced student assessment. Upon completion, students should be able to demonstrate competence in the areas covered by the Instructor Licensing Examination and meet program completion requirements. Prerequisites: Take All: COS 271 and COS 272  
Corequisites: Take COS 273

## Criminal Justice (CJC)

**CJC 100. Basic Law Enforcement Training. 20.0 Credits.** Class-10.0. Clinical-0.0. Lab-30.0. Work-0.0

This course covers the basic skills and knowledge needed for entry-level employment as a law enforcement officer in North Carolina. Topics are divided into general units of study: legal, patrol duties, law enforcement communications, investigations, practical application and sheriff-specific. Upon successful completion, the student will be able to demonstrate competence in the topics and areas required for the state comprehensive certification examination.

**CJC 111. Introduction to Criminal Justice. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course introduces the components and processes of the criminal justice system. Topics include history, structure, functions, and philosophy of the criminal justice system and their relationship to life in our society. Upon completion, students should be able to define and describe the major system components and their interrelationships and evaluate career options.

**CJC 112. Criminology. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course introduces deviant behavior as it relates to criminal activity. Topics include theories of crime causation; statistical analysis of criminal behavior; past, present, and future social control initiatives; and other related topics. Upon completion, students should be able to explain and discuss various theories of crime causation and societal response.

**CJC 113. Juvenile Justice. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course covers the juvenile justice system and related juvenile issues. Topics include an overview of the juvenile justice system, treatment and prevention programs, special areas and laws unique to juveniles, and other related topics. Upon completion, students should be able to identify/discuss juvenile court structure/procedures, function and jurisdiction of juvenile agencies, processing/detention of juveniles, and case disposition.

**CJC 114. Investigative Photography. 2.0 Credits.** Class-1.0. Clinical-0.0. Lab-2.0. Work-0.0

This course covers the operation of digital photographic equipment and its application to criminal justice. Topics include the use of digital cameras, storage of digital images, the retrieval of digital images and preparation of digital images as evidence. Upon completion, students should be able to demonstrate and explain the role and use of digital photography, image storage and retrieval in criminal investigations.

**CJC 120. Interviews/Interrogations. 2.0 Credits.** Class-1.0. Clinical-0.0. Lab-2.0. Work-0.0

This course covers basic and special techniques employed in criminal justice interviews and interrogations. Emphasis is placed on the interview/interrogation process, including interpretation of verbal and physical behavior and legal perspectives. Upon completion, students should be able to conduct interviews/interrogations in a legal, efficient, and professional manner and obtain the truth from suspects, witnesses, and victims.

**CJC 121. Law Enforcement Operations. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course introduces fundamental law enforcement operations. Topics include the contemporary evolution of law enforcement operations and related issues. Upon completion, students should be able to explain theories, practices, and issues related to law enforcement operations.

**CJC 122. Community Policing. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course covers the historical, philosophical, and practical dimensions of community policing. Emphasis is placed on the empowerment of police and the community to find solutions to problems by forming partnerships. Upon completion, students should be able to define community policing, describe how community policing strategies solve problems, and compare community policing to traditional policing.

**CJC 131. Criminal Law. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course covers the history/evolution/principles and contemporary applications of criminal law. Topics include sources of substantive law, classification of crimes, parties to crime, elements of crimes, matters of criminal responsibility, and other related topics. Upon completion, students should be able to discuss the sources of law and identify, interpret, and apply the appropriate statutes/elements.

**CJC 132. Court Procedure & Evidence. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course covers judicial structure/process/procedure from incident to disposition, kinds and degrees of evidence, and the rules governing admissibility of evidence in court. Topics include consideration of state and federal courts, arrest, search and seizure laws, exclusionary and statutory rules of evidence, and other related issues. Upon completion, students should be able to identify and discuss procedures necessary to establish a lawful arrest/search, proper judicial procedures, and the admissibility of evidence.

**CJC 141. Corrections. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course covers the history, major philosophies, components, and current practices and problems of the field of corrections. Topics include historical evolution, functions of the various components, alternatives to incarceration, treatment programs, inmate control, and other related topics. Upon completion, students should be able to explain the various components, processes, and functions of the correctional system.

**CJC 151. Introduction to Loss Prevention. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course introduces the concepts and methods related to commercial and private security systems. Topics include the historical, philosophical, and legal basis of security, with emphasis on security surveys, risk analysis, and associated functions. Upon completion, students should be able to demonstrate and understand security systems, risk management, and the laws relative to loss prevention.

**CJC 160. Terrorism: Underlying Issues. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course identifies the fundamental reasons why America is a target for terrorists, covering various domestic/international terrorist groups and ideologies from a historical aspect. Emphasis is placed upon recognition of terrorist crime scene; weapons of mass destruction; chemical, biological, and nuclear terrorism; and planning considerations involving threat assessments. Upon completion, students should be able to identify and discuss the methods used in terrorists' activities and complete a threat assessment for terrorists' incidents.

**CJC 161. Introduction to Homeland Security. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course introduces the historical, organizational and practical aspects of Homeland Security. Topics include a historic overview, definitions and concepts, organizational structure, communications, technology, mitigation, prevention and preparedness, response and recovery, and the future of Homeland Security. Upon completion, students should be able to explain essential characteristics of terrorism and Homeland Security, and define roles, functions and interdependency between agencies.

**CJC 162. Intelligence Analysis and Security Management. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course examines intelligence analysis and its relationship to the security management of terrorist attacks and other threats to national security of the United States. Topics include a historic overview, definitions and concepts, intelligence evolution-politicization-operations-strategies, surveillance, analysis perspectives, covert action, and ethics. Upon completion, students should be able to outline intelligence policies, evaluate source information, implement intelligence techniques and analysis, identify threats, and apply ethical behaviors.

**CJC 163. Transportation and Border Security. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course provides an in-depth view of modern border and transportation security including the technologies used for detecting potential threats from terrorists and weapons. Topics include an overview of security challenges, detection devices and equipment, transportation systems, facilities, threats and counter-measures, and security procedures, policies and agencies. Upon completion, students should be able to describe border security, the technologies used to enforce it, and the considerations and strategies of border security agencies.

**CJC 170. Critical Incident Mgmt for Public Safety. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course prepares the student to specialize in the direct response, operations, and management of critical incidents. Emphasis is placed upon the theoretical and applied models to understand and manage disasters, terrorism, and school/work place violence. Upon completion, the student should be able to identify and discuss managerial techniques legal issues, and response procedures to critical incidents.

**CJC 193J. Selected Topics in 21st Century Policing. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

Examines the innovative approaches of policing in the 21st Century. Topics include innovative policing, community policing, ethical decision making as well as practical exercises and real-world scenarios in police tactics. Upon completion, students should be able to exhibit leadership abilities, demonstrate the importance of verbal and non-verbal communication, and display the professionalism and decorum required in public safety.

**CJC 211. Counseling. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course introduces the basic elements of counseling and specific techniques applicable to the criminal justice setting. Topics include observation, listening, recording, interviewing, and problem exploration necessary to form effective helping relationships. Upon completion, students should be able to discuss and demonstrate the basic techniques of counseling.

**CJC 212. Ethics & Community Relations. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course covers ethical considerations and accepted standards applicable to criminal justice organizations and professionals. Topics include ethical systems; social change, values, and norms; cultural diversity; citizen involvement in criminal justice issues; and other related topics. Upon completion, students should be able to apply ethical considerations to the decision-making process in identifiable criminal justice situations.

**CJC 213. Substance Abuse. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course is a study of substance abuse in our society. Topics include the history and classifications of drug abuse and the social, physical, and psychological impact of drug abuse. Upon completion, students should be able to identify various types of drugs, their effects on human behavior and society, and treatment modalities.

**CJC 214. Victimology. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course introduces the study of victims. Emphasis is placed on roles/ characteristics of victims, victim interaction with the criminal justice system and society, current victim assistance programs, and other related topics. Upon completion, students should be able to discuss and identify victims, the uniqueness of victims' roles, and current victim assistance programs.

**CJC 215. Organization & Administration. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course introduces the components and functions of organization and administration as it applies to the agencies of the criminal justice system. Topics include operations/functions of organizations; recruiting, training, and retention of personnel; funding and budgeting; communications; span of control and discretion; and other related topics. Upon completion, students should be able to identify and discuss the basic components and functions of a criminal justice organization and its administrative operations.

**CJC 221. Investigative Principles. 4.0 Credits.** Class-3.0. Clinical-0.0. Lab-2.0. Work-0.0

This course introduces the theories and fundamentals of the investigative process. Topics include crime scene/incident processing, information gathering techniques, collection/preservation of evidence, preparation of appropriate reports, court presentations, and other related topics. Upon completion, students should be able to identify, explain, and demonstrate the techniques of the investigative process, report preparation, and courtroom presentation.

**CJC 222. Criminalistics. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course covers the functions of the forensic laboratory and its relationship to successful criminal investigations and prosecutions. Topics include advanced crime scene processing, investigative techniques, current forensic technologies, and other related topics. Upon completion, students should be able to identify and collect relevant evidence at simulated crime scenes and request appropriate laboratory analysis of submitted evidence.

**CJC 223. Organized Crime. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course introduces the evolution of traditional and non-traditional organized crime and its effect on society and the criminal justice system. Topics include identifying individuals and groups involved in organized crime, areas of criminal activity, legal and political responses to organized crime, and other related topics. Upon completion, students should be able to identify the groups and activities involved in organized crime and the responses of the criminal justice system.

**CJC 225. Crisis Intervention. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course introduces critical incident intervention and management techniques as they apply to operational criminal justice practitioners. Emphasis is placed on the victim/offender situation as well as job-related high stress, dangerous, or problem-solving citizen contacts. Upon completion, students should be able to provide insightful analysis of emotional, violent, drug-induced, and other critical and/or stressful incidents that require field analysis and/or resolution.

**CJC 231. Constitutional Law. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

The course covers the impact of the Constitution of the United States and its amendments on the criminal justice system. Topics include the structure of the Constitution and its amendments, court decisions pertinent to contemporary criminal justice issues, and other related topics. Upon completion, students should be able to identify/discuss the basic structure of the United States Constitution and the rights/procedures as interpreted by the courts.

**CJC 232. Civil Liability. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course covers liability issues for the criminal justice professional. Topics include civil rights violations, tort liability, employment issues, and other related topics. Upon completion, students should be able to explain civil trial procedures and discuss contemporary liability issues.

**CJC 233. Correctional Law. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course introduces statutory/case law pertinent to correctional concepts, facilities, and related practices. Topics include examination of major legal issues encompassing incarceration, probation, parole, restitution, pardon, restoration of rights, and other related topics. Upon completion, students should be able to identify/discuss legal issues which directly affect correctional systems and personnel.

**CJC 241. Community-Based Corrections. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course covers programs for convicted offenders that are used both as alternatives to incarceration and in post-incarceration situations. Topics include offenders, diversion, house arrest, restitution, community service, probation and parole, including both public and private participation, and other related topics. Upon completion, students should be able to identify/discuss the various programs from the perspective of the criminal justice professional, the offender, and the community.

**CJC 255. Issues in Criminal Justice Application. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course provides an opportunity to exhibit interpersonal and technical skills required for application of criminal justice concepts in contemporary practical situations. Emphasis is placed on critical thinking and integration of theory and practical skills components. Upon completion, students should be able to demonstrate the knowledge required of any entry-level law enforcement officer.

Prerequisites: Take All: CJC 111, CJC 221, and CJC 231

## Culinary (CUL)

**CUL 110. Sanitation and Safety. 2.0 Credits.** Class-2.0. Clinical-0.0. Lab-0.0. Work-0.0

This course introduces the basic principles of sanitation and safety relative to the hospitality industry. Topics include personal hygiene, sanitation and safety regulations, use and care of equipment, the principles of food-borne illness, and other related topics. Upon completion, students should be able to demonstrate an understanding of the content necessary for successful completion of a nationally recognized food/safety/sanitation exam.

Prerequisites: Take DMA 010 DMA 020 DMA 030

Corequisites: Take CUL 111 and CUL 112

**CUL 110A. Sanitation and Safety Lab. 1.0 Credit.** Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0

This course provides a laboratory experience for enhancing student skills in the basic principles of sanitation and safety. Emphasis is placed on personal hygiene, sanitation and safety regulations, use and care of equipment, the principles of food-borne illness, and other related topics. Upon completion, students should be able to demonstrate practical applications of sanitation and safety procedures in the hospitality industry.

Corequisites: Take CUL 110

**CUL 111. Success in Hospitality Studies. 1.0 Credit.** Class-1.0. Clinical-0.0. Lab-0.0. Work-0.0

This course provides an orientation to the resources available and academic skills necessary to achieve success in a hospitality program. Emphasis is placed on technical and interpersonal skills, study skills, ethics, professionalism and time management as they relate to a hospitality field. Upon completion, students should be able to manage their learning experiences to successfully meet their educational goals.

Prerequisites: Take DMA 010 DMA 020 DMA 030

Corequisites: Take CUL 110 and CUL 112

**CUL 112. Nutrition for Foodservice. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course covers the principles of nutrition and its relationship to the foodservice industry. Topics include personal nutrition fundamentals, weight management, exercise, nutritional adaptation/analysis of recipes/menus, healthy cooking techniques and marketing nutrition in a foodservice operation. Upon completion, students should be able to apply basic nutritional concepts to food preparation and selection.

**CUL 130. Menu Design. 2.0 Credits.** Class-2.0. Clinical-0.0. Lab-0.0. Work-0.0

This course introduces menu design and its relationship to foodservice operations. Topics include layout, marketing, concept development, dietary concerns, product utilization, target consumers and trends. Upon completion, students should be able to design, create and produce menus for a variety of foodservice settings.

Prerequisites: Take CUL 111 with a minimum grade of C

**CUL 135. Food and Beverage Service. 2.0 Credits.** Class-2.0. Clinical-0.0. Lab-0.0. Work-0.0

This course is designed to cover the practical skills and knowledge necessary for effective food and beverage service in a variety of settings. Topics include greeting/service of guests, dining room set-up, profitability, menu sales and merchandising, service styles and reservations. Upon completion, students should be able to demonstrate competence in human relations and the skills required in the service of foods and beverages.

Corequisites: Take CUL 135A

**CUL 135A. Food and Beverage Service Lab. 1.0 Credit.** Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0

This course provides a laboratory experience for enhancing student skills in effective food and beverage service. Emphasis is placed on practical experiences including greeting/service of guests, dining room set-up, profitability, menu sales and merchandising, service styles and reservations. Upon completion, students should be able to demonstrate practical applications of human relations and the skills required in the service of foods and beverages.

Corequisites: Take CUL 135

**CUL 140A. Culinary Skills I Lab. 1.0 Credit.** Class-0.0. Clinical-0.0. Lab-3.0. Work-0.0

This course provides laboratory experience for enhancing student skills in the fundamental concepts, skills and techniques in basic cookery, and moist, dry and combination heat. Emphasis is placed on practical experiences including recipe conversion, measurements, terminology, classical knife cuts, safe food/equipment handling, flavorings/seasonings, stocks/sauces/soups, and related topics. Upon completion, students should be able to demonstrate competency in the basic cooking skills used in the foodservice industry.

Corequisites: Take CUL 110 and CUL 140

**CUL 140. Culinary Skills I. 5.0 Credits.** Class-2.0. Clinical-0.0. Lab-6.0. Work-0.0

This course introduces the fundamental concepts, skills and techniques in basic cookery, and moist, dry and combination heat. Emphasis is placed on recipe conversion, measurements, terminology, classical knife cuts, safe food/equipment handling, flavorings/seasonings, stocks/sauces/soups, and related topics. Upon completion, students should be able to exhibit the basic cooking skills used in the foodservice industry. Guest service may be a course component.

Prerequisites: Take MAT 110 MAT 121 MAT 122 MAT 152 MAT 171 MAT 172 MAT 223 MAT 263 MAT 271 MAT 272 MAT 273 or MAT 285  
Minimum grade C

Corequisites: Take CUL 140A

**CUL 142. Fundamentals of Food. 5.0 Credits.** Class-2.0. Clinical-0.0. Lab-6.0. Work-0.0

This course introduces the student to the basic principles of cooking, baking and kitchen operations. Topics include preparation methods for protein, starch, vegetable/fruit identification/selection, storage; breakfast cookery, breads, sweet dough/pastries, basic fabrication, knife skills, and mise en place. Upon completion, students should be able to execute efficiently a broad range of basic cooking/baking skills as they apply to different stations in foodservice operations.

Corequisites: Take CUL 110

**CUL 150. Food Science. 2.0 Credits.** Class-1.0. Clinical-0.0. Lab-2.0. Work-0.0

This course covers the chemical and physical changes in foods that occur with cooking, handling, and processing. Emphasis is placed on practical application of heat transfer and its effect on color/flavor/texture, emulsification, protein coagulation, leavening agents, viscosity, and gel formation. Upon completion, students should be able to demonstrate an understanding of these principles as they apply to food preparation in an experimental setting.

Prerequisites: Take CUL 110 Minimum grade C

**CUL 160. Baking I. 3.0 Credits.** Class-1.0. Clinical-0.0. Lab-4.0. Work-0.0

This course covers basic ingredients, techniques, weights and measures, baking terminology and formula calculations. Topics include yeast/chemically leavened products, laminated doughs, pastry dough batter, pies/tarts, meringue, custard, cakes and cookies, icings, glazes and basic sauces. Upon completion, students should be able to demonstrate proper scaling and measurement techniques, and prepare and evaluate a variety of bakery products.

Corequisites: Take CUL 160A

**CUL 160A. Baking I Lab. 1.0 Credit.** Class-0.0. Clinical-0.0. Lab-3.0. Work-0.0

This course provides a laboratory experience for enhancing student skills in basic baking. Emphasis is placed on the practical experiences of yeast/chemically leavened products, laminated/pastry dough, batter, pies/tarts, meringue, custard, cakes and cookies, icings, glazes and basic sauces. Upon completion, students should be able to demonstrate a basic proficiency in bakeshop applications.

Corequisites: Take CUL 160 and CUL 110

**CUL 170. Garde Manger I. 3.0 Credits.** Class-1.0. Clinical-0.0. Lab-4.0. Work-0.0

This course introduces basic cold food preparation techniques and pantry production. Topics include salads, sandwiches, appetizers, dressings, basic garnishes, cheeses, cold sauces, and related food items. Upon completion, students should be able to present a cold food display and exhibit an understanding of the cold kitchen and its related terminology.

Corequisites: Take CUL 170A

**CUL 170A. Garde Manger I Lab. 1.0 Credit.** Class-0.0. Clinical-0.0. Lab-3.0. Work-0.0

This course provides a laboratory experience for enhancing student skills in basic cold food preparation techniques and pantry production. Emphasis is placed on the practical experiences that include salads, sandwiches, appetizers, dressings, basic garnishes, cheeses, cold sauces, and related food items. Upon completion, students should be able to demonstrate proficiency in the design of a cold food display.

Corequisites: Take CUL 170 and CUL 110



**CUL 230. Global Cuisines. 5.0 Credits.** Class-1.0. Clinical-0.0. Lab-8.0. Work-0.0

This course provides practical experience in the planning, preparation, and presentation of representative foods from a variety of world cuisines. Emphasis is placed on indigenous ingredients and customs, nutritional concerns, and cooking techniques. Upon completion, students should be able to research and execute a variety of international and domestic menus.

Prerequisites: Take CUL 110, CUL 140, and CUL 240 Minimum grade C

Corequisites: Take CUL 230A

**CUL 230A. Global Cuisines Lab. 1.0 Credit.** Class-0.0. Clinical-0.0. Lab-3.0. Work-0.0

This course provides a laboratory experience for enhancing student skills with cuisines from around the world. Emphasis is placed on production of global cuisines based on historical and geographical influences, ingredients, customs, and cooking techniques. Upon completion, students should be able to exhibit an understanding of the culinary practices and techniques of specific countries.

Prerequisites: Take CUL 110 and CUL 140 Minimum grade C

Corequisites: Take CUL 230

**CUL 240A. Culinary Skills II Lab. 1.0 Credit.** Class-0.0. Clinical-0.0. Lab-3.0. Work-0.0

This course provides a laboratory experience for furthering students' knowledge of the fundamental concepts, skills, and techniques involved in basic cookery. Emphasis is placed on practical applications of meat identification/fabrication; butchery and cooking techniques/methods; appropriate vegetable/starch accompaniments; compound sauces; plate presentation; breakfast cookery; and food preparation. Upon completion, students should be able to demonstrate a basic proficiency in the preparation of entrees and accompaniments.

Prerequisites: Take CUL 110 CUL 140 Minimum grade C

Corequisites: Take CUL 240

**CUL 240. Culinary Skills II. 5.0 Credits.** Class-1.0. Clinical-0.0. Lab-8.0. Work-0.0

This course is designed to further students' knowledge of the fundamental concepts, skills, and techniques involved in basic cookery. Emphasis is placed on meat identification/fabrication, butchery and cooking techniques/methods; appropriate vegetable/starch accompaniments; compound sauces; plate presentation; breakfast cookery; and quantity food preparation. Upon completion, students should be able to plan, execute, and successfully serve entrees with complementary side items. Guest service may be a course component.

Prerequisites: Take 1 group Take CUL 110 CUL 140 with a minimum grade of C

Take CUL 110 CUL 142 CUL 170 with a minimum grade of C

Corequisites: Take CUL 240A

**CUL 245. Contemporary Cuisines. 5.0 Credits.** Class-1.0. Clinical-0.0. Lab-8.0. Work-0.0

This course introduces students to current culinary trends which include a variety of preparation methods. Topics include current and developing trends such as adaptation of native/regional ingredients and preparation methods into contemporary cuisines. Upon completion, students should be able to demonstrate knowledge of a variety of contemporary cuisines.

Prerequisites: Take CUL 110 CUL 140 Minimum grade C

Corequisites: Take CUL 245A

**CUL 245A. Contemporary Cuisines Lab. 1.0 Credit.** Class-0.0. Clinical-0.0. Lab-3.0. Work-0.0

This course provides a laboratory experience for enhancing student skills with current culinary trends including a variety of preparation methods. Emphasis is placed on current and developing trends such as adaptation of native/regional ingredients and preparation methods into contemporary cuisines. Upon completion, students should be able to demonstrate knowledge of a variety of contemporary cuisines.

Prerequisites: Take CUL 110 CUL 140 CUL 240 CUL 240A Minimum grade C

Corequisites: Take CUL 245

**CUL 250. Classical Cuisine. 5.0 Credits.** Class-1.0. Clinical-0.0. Lab-8.0. Work-0.0

This course is designed to reinforce the classical culinary kitchen. Topics include the working Grand Brigade of the kitchen, signature dishes and classical banquets. Upon completion, students should be able to demonstrate competence in food preparation in a classical/upscale restaurant or banquet setting.

Prerequisites: Take All: CUL 110, CUL 140, and CUL 240

**CUL 250A. Classical Cuisine Lab. 1.0 Credit.** Class-0.0. Clinical-0.0. Lab-3.0. Work-0.0

This course provides a laboratory experience for enhancing student skills in the classical kitchen. Emphasis is placed on practical experiences with the Grand Brigade of the kitchen, signature dishes and classical banquets. Upon completion, students should be able to exhibit culinary skills and techniques as they pertain to a classical/upscale restaurant or banquet settings.

Prerequisites: Take All: CUL 110, CUL 140, and CUL 240

Corequisites: Take CUL 250

**CUL 260. Baking II. 3.0 Credits.** Class-1.0. Clinical-0.0. Lab-4.0. Work-0.0

This course is designed to further students' knowledge in ingredients, weights and measures, baking terminology and formula calculation. Topics include classical desserts, frozen desserts, cake and torte production, decorating and icings/glazes, dessert plating and presentation. Upon completion, students should be able to demonstrate pastry preparation, plating, and dessert buffet production skills.

Prerequisites: Take CUL 110 Minimum grade C

Corequisites: Take CUL 260A

**CUL 260A. Baking II Lab. 1.0 Credit.** Class-0.0. Clinical-0.0. Lab-3.0. Work-0.0

This course provides a laboratory experience for enhancing student skills in classical desserts, laminated pastry dough, cake and torte decorating. Topics include practical experiences with classical desserts, frozen desserts, cake and torte production, decorating and icings/glazes, dessert plating and presentation. Upon completion, students should be able to perform cake-decorating techniques, produce pastry showpieces, and prepare and plate assorted pastries.

Prerequisites: Take CUL 110 Minimum grade C

Corequisites: Take CUL 260

**CUL 270. Garde Manger II. 3.0 Credits.** Class-1.0. Clinical-0.0. Lab-4.0. Work-0.0

This course is designed to further students' knowledge in basic cold food preparation techniques and pantry production. Topics include pates, terrines, galantines, decorative garnishing skills, carving, charcuterie, smoking, canapes, hors d'oeuvres, and related food items. Upon completion, students should be able to design, set up, and evaluate a catering/event display to include a cold buffet with appropriate showpieces. This course is a continuation of cul170. Topics include pates, terrines, galantines, ice and tallow carving, chafroid/Aspic work, charcuterie, smoking canapes, hors d'oeuvres, and related food items. Upon completion, students should be able to design, set up, and evaluate a catering function to include a classical cold buffet with appropriate show pieces.

Prerequisites: Take CUL 110 CUL 140 Minimum grade C

Corequisites: Take CUL 270A

**CUL 270A. Garde Manger II Lab. 1.0 Credit.** Class-0.0. Clinical-0.0. Lab-3.0. Work-0.0

This course provides a laboratory experience for enhancing student skills in basic cold food preparation techniques and pantry production. Emphasis is placed on practical experiences with pates, terrines, galantines, decorative garnishing skills, carving, charcuterie, smoking, canapes, hors d'oeuvres, and related food items. Upon completion, students should be able to demonstrate proficiency in the design/technical applications of advanced garde manger work including classical cold buffets incorporating appropriate showpieces.

Prerequisites: Take CUL 110 CUL 140 Minimum grade C

Corequisites: Take CUL 270

**CUL 273. Career Development. 1.0 Credit.** Class-1.0. Clinical-0.0. Lab-0.0. Work-0.0

This course introduces students to career planning/management practices that serve as a foundation for success in the hospitality industry. Emphasis is placed on self assessment, goal/career pathway development and employment strategies such as resume preparation, interviewing techniques, and developing/utilizing the portfolio as a credential. Upon completion, students should be able to develop a career path leading to an effective job search.

**CUL 275. Catering Cuisine. 5.0 Credits.** Class-1.0. Clinical-0.0. Lab-8.0. Work-0.0

This course covers the sequential steps to successful catering that include sales, client needs, menu planning, purchasing, costing, event pricing, staffing and sanitation concerns. Emphasis is placed on new culinary competencies and skills specific to catering preparation, presentation, and customer service. Upon completion, students should be able to demonstrate proficiency in the successful design and execution of various types of catering events.

Prerequisites: Take All: CUL 110, CUL 140, and CUL 240

**CUL 283. Farm-To-Table. 5.0 Credits.** Class-2.0. Clinical-0.0. Lab-6.0. Work-0.0

This course introduces students to the cooperation between sustainable farmers and foodservice operations. Emphasis is placed on environmental relationships, including how foods are grown, processed, and distributed, as well as related implications on quality and sustainability. Upon completion, students should be able to demonstrate an understanding of environmental stewardship and its impact on cuisine.

Prerequisites: Take All: CUL 110 and CUL 140

**CUL 285. Competition Fundamentals. 3.0 Credits.** Class-1.0. Clinical-0.0. Lab-4.0. Work-0.0

This course provides practical experience in planning, techniques, and procedures required for culinary competitions and exhibitions. Emphasis is placed on competition strategies including menu planning, teamwork, plate design, flavor profiles, recipe development, nutrition, advanced knife/culinary skills, professionalism, and portfolio development. Upon completion, students should be able to apply competition/exhibition skills and standards in the competition arena and professional kitchen.

Prerequisites: Take One: CUL 110, CUL 110A, CUL 140, or CUL 160

**CUL 287. Cultural Experience. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0

This course is designed to provide the background cultural information necessary for students to maximize a cultural experience. Emphasis is placed on language skills, culture, culinary traditions and cuisines, and an appreciation of the local history. Upon completion, students should exhibit an understanding of the unique character of the studied culture, specifically those relating to culinary arts.

Prerequisites: Take All: CUL 110, CUL 140, and CUL 240

## Cyber Crime Technology (CCT)

**CCT 110. Introduction to Cyber Crime. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course introduces and explains the various types of offenses that qualify as cyber crime activity. Emphasis is placed on identifying cyber crime activity and the response to these problems from both the private and public domains. Upon completion, students should be able to accurately describe and define cyber crime activities and select an appropriate response to deal with the problem.

**CCT 121. Computer Crime Investigation. 4.0 Credits.** Class-3.0. Clinical-0.0. Lab-2.0. Work-0.0

This course introduces the fundamental principles of computer crime investigation processes. Topics include crime scene/incident processing, information gathering techniques, data retrieval, collection and preservation of evidence, preparation of reports and court presentations. Upon completion, students should be able to identify cyber crime activity and demonstrate proper investigative techniques to process the scene and assist in case prosecution.

Prerequisites: Take CTI 130 Minimum grade C

**CCT 231. Technology Crimes & Law. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course covers the applicable technological laws dealing with the regulation of cyber security and criminal activity. Topics include an examination of state, federal and international laws regarding cyber crime with an emphasis on both general and North Carolina statutes. Upon completion, students should be able to identify the elements of cyber crime activity and discuss the trends of evolving laws.

**CCT 240. Data Recovery Techniques. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0

This course introduces the unique skills and methodologies necessary to assist in the investigation and prosecution of cyber crimes. Topics include hardware and software issues, recovering erased files, overcoming encryption, advanced imaging, transient data, Internet issues and testimony considerations. Upon completion, students should be able to recover digital evidence, extract information for criminal investigation and legally seize criminal evidence.

Prerequisites: Take CCT 121 Minimum grade C

**CCT 241. Advanced Data Recovery. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0

This course further explores the methodologies necessary to assist in the investigation and analysis of cyber crimes. Topics include commercial and open-source software tools for working with evidence acquisition, data recovery, and encryption. Upon completion, students should be able to perform the data recovery and analysis for a complete criminal or corporate investigation.

Prerequisites: Take CCT 240 Minimum grade C

**CCT 260. Mobile Phone Examination. 3.0 Credits.** Class-1.0. Clinical-0.0. Lab-4.0. Work-0.0

This course introduces the unique skills and methodologies necessary to assist in the investigation and prosecution of cyber crimes involving mobile phones. Topics include the basics of the cellular networks as well as data extraction from GSM, iDEN and CDMA handsets. Upon completion, students should be able to use the course processes and methodologies to obtain forensic evidence from GSM, iDEN and CDMA handsets.

Prerequisites: Take CCT 240 Minimum grade C

**CCT 289. Capstone Project. 3.0 Credits.** Class-1.0. Clinical-0.0. Lab-6.0. Work-0.0

This course provides experience in cyber crime investigations or technology security audits in either the public or private domain. Emphasis is placed on student involvement with businesses or agencies dealing with technology security issues or computer crime activities. Upon completion, students should be able to successfully analyze, retrieve erased evidence and testify in mock proceedings against these criminal entrepreneurs.

Prerequisites: Take All: CCT 231 and CCT 241

## Cytotechnology (CYT)

**CYT 210. Introduction to Clinical Cytology. 4.0 Credits.** Class-4.0. Clinical-0.0. Lab-0.0. Work-0.0

This course provides an overview of the fundamentals of cell biology, basic histology, immunology, and laboratory operations and management as they relate to clinical cytology. Topics include the cell and cell division, histology, inflammatory processes, the immune response, CLIA, professional cytology organizations, workload limits, quality control, quality assurance, billing and coding in cytopathology, LIS systems and ethics. Upon completion, students should be able to understand basic cell biology, histology, immunologic processes, informatics, and the ethical role and responsibilities of the cytotechnologist in healthcare.

Corequisites: Take CYT 212, CYT 214, CYT 216 and CYT 222

**CYT 212. Intro to Cyto Techniques. 4.0 Credits.** Class-4.0. Clinical-0.0. Lab-0.0. Work-0.0

The course covers care and use of the light microscope and histological and cytological specimen preparation techniques and equipment. Topics include laboratory safety, chemical hygiene, universal precautions, and fundamentals of staining and fixation. Upon completion, students should be able to discuss and demonstrate the care and use of the microscope and discuss basic concepts of staining and fixation.

Corequisites: Take CYT 210, CYT 214, CYT 216 and CYT 222

**CYT 214. Gynecological Cytology. 14.0 Credits.** Class-8.0. Clinical-0.0. Lab-12.0. Work-0.0

This course covers gynecologic cytology, including, normal cytology, pre-malignancies, malignancies, and treatment modalities. Topics include anatomy, physiology, histology, and embryology of the female genital tract and breast; normal cytology, hormonal cytology, microorganisms, precursor lesions, carcinomas, treatment modalities, extrauterine and uncommon tumors, and FNA of the gonads and breast. Upon completion, students should be able to microscopically identify and discriminate between normal and pathological processes in the female genital tract or breast.

Corequisites: Take CYT 210, CYT 212, CYT 216 and CYT 222

**CYT 216. Clinical and Diagnostic Interpretation I. 4.0 Credits.** Class-4.0. Clinical-0.0. Lab-0.0. Work-0.0

This course covers cytologic criteria and clinical correlations for representative cytologic and histologic specimens from the female genital tract. Emphasis is placed on the cytology and histology of the female genital system through unknown cases and image exercises. Upon completion, students should be able to detect, diagnose, and appropriately mark cells representative of any normal or pathological process from the female genital tract.

Corequisites: Take CYT 210, CYT 212, CYT 214 and CYT 222

**CYT 220. Non-Gynecological Cytology. 12.0 Credits.** Class-8.0. Clinical-0.0. Lab-8.0. Work-0.0

This course covers non-gynecologic cytology and fine needle aspiration biopsy of all body sites. Topics include the anatomy, histology, pathology, and cytopathology of the respiratory tract, body cavities, urinary tract, gastrointestinal tract, head and neck, and central nervous system. Upon completion, students should be able to microscopically identify and discriminate between normal and pathological processes in non-gynecologic cytology.

Prerequisites: Take All: CYT 210, CYT 212, CYT 214, CYT 216, and CYT 222

Corequisites: Take CYT 224, CYT 226, CYT 236 and CYT 238

**CYT 222. Cytopreparation Techniques. 2.0 Credits.** Class-2.0. Clinical-0.0. Lab-0.0. Work-0.0

This course covers the fundamental principles of cytopreparation for cytological specimens. Emphasis is placed on techniques related to cytopreparation. Upon completion, students should be able to demonstrate competence in the various cytopreparation methods.

Corequisites: Take CYT 210, CYT 212, CYT 214 and CYT 216

**CYT 224. Gynecological Cytology Clinical Practicum I. 4.0 Credits.** Class-0.0. Clinical-12.0. Lab-0.0. Work-0.0

This course provides supervised clinical experience in gynecologic cytology. Emphasis is placed on cytological diagnosis by routine screening methods and observation of various procedures relevant to gynecologic cytology. Upon completion, students should be able to demonstrate mastery of all diagnostic skills.

Prerequisites: Take All: CYT 210, CYT 212, CYT 214, CYT 216, and CYT 222

Corequisites: Take CYT 220, CYT 226, CYT 236 and CYT 238

**CYT 226. Clinical and Diagnostic Interpretation II. 4.0 Credits.**

Class-4.0. Clinical-0.0. Lab-0.0. Work-0.0

This course covers cytologic criteria and clinical correlations for representative cytologic and histologic specimens from non-gynecologic body sites. Emphasis is placed on the cytology and histology of non-gynecologic body sites through unknown cases and image exercises. Upon completion, students should be able to detect, diagnose, and appropriately mark cells representative of any normal or pathological process from non-gynecologic body sites.

Prerequisites: Take All: CYT 210, CYT 212, CYT 214, CYT 216, and CYT 222

Corequisites: Take CYT 220, CYT 224, CYT 236 and CYT 238

**CYT 230. Non-Gynecological Cytology Clinical Practicum. 2.0 Credits.**

Class-0.0. Clinical-6.0. Lab-0.0. Work-0.0

This course provides supervised clinical experience in non-gynecologic cytology. Emphasis is placed on cytological diagnosis by routine screening methods and observation of various procedures relevant to non-gynecologic cytology. Upon completion, students should be able to demonstrate mastery of all diagnostic skills.

Prerequisites: Take All: CYT 220, CYT 224, CYT 226, CYT 236, and CYT 238

Corequisites: Take CYT 232 and CYT 234

**CYT 232. Clinical Cytology Practicum. 1.0 Credit.** Class-0.0.

Clinical-3.0. Lab-0.0. Work-0.0

This course provides supervised clinical experience in a variety of clinical settings. Emphasis is placed on teamwork in the clinical setting with utilization of cytodagnostic and cytopreparation skills. Upon completion, students should be able to function effectively as an entry-level cytotechnologist.

Prerequisites: Take All: CYT 220, CYT 224, CYT 226, CYT 236, and CYT 238

Corequisites: Take CYT 230 and CYT 234

**CYT 234. Gynecological Cytology Clinical Practicum II. 3.0 Credits.**

Class-0.0. Clinical-9.0. Lab-0.0. Work-0.0

This course provides supervised clinical experience in gynecologic cytology. Emphasis is placed on cytological diagnosis by routine screening methods and observation of various procedures relevant to gynecologic cytology. Upon completion, students should be able to demonstrate mastery of all diagnostic skills.

Prerequisites: Take All: CYT 220, CYT 224, CYT 226, CYT 236, and CYT 238

Corequisites: Take CYT 230 and CYT 232

**CYT 236. Cytology Literature Review. 1.0 Credit.** Class-1.0. Clinical-0.0.

Lab-0.0. Work-0.0

This course covers the review and critique of medical literature with emphasis placed on topics in cytopathology. Topics include gynecologic and non-gynecologic cytology. Upon completion, students should be able to analyze, critique, and present scientific articles.

Prerequisites: Take All: CYT 210, CYT 212, CYT 214, CYT 216, and CYT 222

Corequisites: Take CYT 220, CYT 224, CYT 226 and CYT 238

**CYT 238. Ancillary Studies in Cytopathology. 2.0 Credits.** Class-2.0.

Clinical-0.0. Lab-0.0. Work-0.0

This course covers the fundamental principles and applications of special and immunohistochemical staining, as well as the principles and applications of molecular testing as they relate to the cytopathology laboratory. Emphasis is placed on the types of special stains used in cytopathology, on identifying positive and negative staining results, and on the application of molecular testing in cytopathology. Upon completion, students should be able to understand the application and interpretation of various special and immunohistochemical stains, and understand the various molecular tests available for use in cytopathology.

Prerequisites: Take All: CYT 210, CYT 212, CYT 214, CYT 216, and CYT 222

Corequisites: Take CYT 220, CYT 224, CYT 226 and CYT 236

## Dance (DAN)

**DAN 110. Dance Appreciation. 3.0 Credits.** Class-3.0. Clinical-0.0.

Lab-0.0. Work-0.0

This course for non-dance majors surveys diverse dance forms and the religious and cultural values that shape them. Topics include dances from Europe, Africa, Asia, and America. Upon completion, students should be able to demonstrate an understanding of the diverse forms and values that dance embraces.

**DAN 124. Jazz Dance I. 1.0 Credit.** Class-0.0. Clinical-0.0. Lab-3.0.

Work-0.0

This course provides the fundamentals of elementary jazz technique.

Emphasis is placed on body placement, stretching, jazz movements, and syncopated rhythms. Upon completion, students should be able to demonstrate significant progress in fundamental jazz dance technique and simple center combinations.

**DAN 125. Jazz Dance II. 1.0 Credit.** Class-0.0. Clinical-0.0. Lab-3.0.

Work-0.0

This course is the second in a series and provides an expansion of elementary/intermediate jazz dance. Emphasis is placed on "Cool Jazz," theatrical jazz styles, and extended sequences of movement (routines). Upon completion, students should be able to demonstrate moderate mastery of elementary/intermediate-level jazz dance and be able to perform routines.

Prerequisites: Take DAN 124

**DAN 130. Ballet I. 2.0 Credits.** Class-0.0. Clinical-0.0. Lab-4.0. Work-0.0

This course introduces the elementary elements of ballet technique.

Emphasis is placed on simple positions, body placement, classroom discipline, and the Dalcroze method of counting music. Upon completion, students should be able to recognize the names and rhythms of basic steps and be able to perform those movements at barre and in center.

**DAN 131. Ballet II. 2.0 Credits.** Class-0.0. Clinical-0.0. Lab-4.0. Work-0.0

This course is the second in a series of elementary ballet techniques.

Emphasis is placed on motor skill development, elementary allegro steps, and body positions. Upon completion, students should be able to exhibit moderate technical skill in elementary ballet.



**DAN 132. Intermediate Ballet I. 2.0 Credits.** Class-0.0. Clinical-0.0. Lab-4.0. Work-0.0

This course introduces the intermediate elements of ballet technique. Emphasis is placed on intermediate steps, memory of set patterns, and progress in skills, especially turns and allegros. Upon completion, students should be able to exhibit significant progress in intermediate ballet technique and the ability to memorize extended combinations of steps.

Prerequisites: Take DAN 131

**DAN 133. Intermediate Ballet II. 2.0 Credits.** Class-0.0. Clinical-0.0. Lab-4.0. Work-0.0

This course is the second in a series of intermediate ballet technique. Emphasis is placed on progress in intermediate skills, memory and execution of steps, especially Grande Allegro. Upon completion, students should be able to exhibit significant achievement in intermediate ballet technique and the ability to quickly learn and retain combinations.

Prerequisites: Take DAN 132

**DAN 140. Modern Dance I. 2.0 Credits.** Class-0.0. Clinical-0.0. Lab-4.0. Work-0.0

This course introduces the elementary elements of modern dance technique. Emphasis is placed on floor, barre, and center floor exercises. Upon completion, students should be able to exhibit a basic understanding and skill in performing elementary modern dance technique.

**DAN 141. Modern Dance II. 2.0 Credits.** Class-0.0. Clinical-0.0. Lab-4.0. Work-0.0

This course is the second in a series of elementary modern dance technique. Emphasis is placed on motor skill development and simple combinations in center floor. Upon completion, students should be able to exhibit moderate technical skill in elementary modern dance technique.

**DAN 142. Intermediate Modern Dance I. 2.0 Credits.** Class-0.0. Clinical-0.0. Lab-4.0. Work-0.0

This course introduces intermediate modern dance technique. Emphasis is placed on kinesthesia (body energy) and intermediate movements including turns, spirals, and jumps. Upon completion, students should be able to demonstrate significant progress in intermediate technique and extended movement sequences.

Prerequisites: Take DAN 141

**DAN 143. Intermediate Modern Dance II. 2.0 Credits.** Class-0.0. Clinical-0.0. Lab-4.0. Work-0.0

This course is the second in a series of intermediate modern dance technique. Emphasis is placed on progress in intermediate skills, musical phrasing, and introduction to selections of modern dance repertoire. Upon completion, students should be able to demonstrate significant achievement in intermediate technique and to begin to practice selections of its repertoire.

Prerequisites: Take DAN 142

**DAN 221. Advanced Modern Dance I. 2.0 Credits.** Class-0.0. Clinical-0.0. Lab-4.0. Work-0.0

This course introduces the advanced elements of modern dance technique. Emphasis is placed on advanced movements, mastery of technical skills, and spatial divisions. Upon completion, students should be able to demonstrate significant progress in the execution of all movements and to demonstrate a sense of quality in them.

Prerequisites: Take DAN 143

**DAN 222. Advanced Modern Dance II. 2.0 Credits.** Class-0.0. Clinical-0.0. Lab-4.0. Work-0.0

This course is the second in a series of advanced modern dance technique. Emphasis is placed on mastery and quality of technical skills and execution of complicated movement variations in extended sequence. Upon completion, students should be able to demonstrate significant achievement in modern dance skills and the ability to perform modern dance repertoire.

Prerequisites: Take DAN 221

**DAN 225. Choreography I. 3.0 Credits.** Class-1.0. Clinical-0.0. Lab-4.0. Work-0.0

This course introduces the fundamental techniques of modern dance choreography. Emphasis is placed on improvisation and development of movement phrases. Upon completion, students should be able to create simple movements, improvise upon them, and develop longer movement phrases to create short dances.

Prerequisites: Take DAN 140

**DAN 226. Choreography II. 3.0 Credits.** Class-1.0. Clinical-0.0. Lab-4.0. Work-0.0

This course introduces the elements of dance (time, space, form) and structural forms as used to choreograph. Emphasis is placed on the use of design, dynamics, rhythm, motivation, and musical forms to create dances. Upon completion, students should be able to utilize the elements of time, space, and form and form manipulation to choreograph and rehearse a group dance.

Prerequisites: Take DAN 140

**DAN 236. Advanced Ballet I. 2.0 Credits.** Class-0.0. Clinical-0.0. Lab-4.0. Work-0.0

This course introduces the advanced elements of ballet technique. Emphasis is placed on refinement of all technical skills, learning advanced movements, pointe (female) and big jumps (male). Upon completion, students should be able to exhibit significant progress in the execution of all movements and to demonstrate a sense of quality in them.

Prerequisites: Take DAN 133

**DAN 237. Advanced Ballet II. 2.0 Credits.** Class-0.0. Clinical-0.0. Lab-4.0. Work-0.0

This course is the second in a series of advanced ballet technique. Emphasis is placed on mastery and quality of all skills, refinement of movements, pointe (female) and big jumps (male). Upon completion, students should be able to demonstrate significant achievement in all ballet skills and the ability to perform ballet repertoire.

Prerequisites: Take DAN 236

**DAN 262. Dance Performance. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0

This course includes audition, casting, rehearsal, and video performance of a new ballet. Emphasis is placed on universal rehearsal techniques, improvement of dance techniques, teamwork, and performance of new choreography. Upon completion, students should be able to demonstrate through video performance a basic knowledge of the creation of a new ballet.

**DAN 264. Dance Production. 3.0 Credits.** Class-0.0. Clinical-0.0. Lab-9.0. Work-0.0

This course covers creation, rehearsal, and performance, before a live audience, of a new or reconstructed work by faculty, guest artist, or repertory. Emphasis is placed on movement, memory skills, role development, accepted professional behavior, and ability to project the choreographer's intent. Upon completion, students should be able to demonstrate through performance a basic knowledge of the artistic and technical aspects of performing before a live audience.

# Database Management Technology (DBA)

**DBA 110. Database Concepts. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0

This course introduces database design and creation using a DBMS product. Emphasis is placed on data dictionaries, normalization, data integrity, data modeling, and creation of simple tables, queries, reports, and forms. Upon completion, students should be able to design and implement normalized database structures by creating simple database tables, queries, reports, and forms.

Prerequisites: Take CIS 110 or CTI 110 Minimum grade C

**DBA 112. Database Utilization. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0

This course introduces basic database functions and uses. Emphasis is placed on database manipulation with queries, reports, forms, and some table creation. Upon completion, students should be able to enter and manipulate data from the end user mode.

Prerequisites: Take CIS 110 CTI 110 or DBA 110 Minimum grade C

**DBA 115. Database Applications. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0

This course applies concepts learned in DBA 110 to a specific DBMS. Topics include manipulating multiple tables, advanced queries, screens and reports, linking, and command files. Upon completion, students should be able to create multiple table systems that demonstrate updates, screens, and reports representative of industry requirements.

Prerequisites: Take DBA 110

**DBA 120. Database Programming I. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0

This course is designed to develop SQL programming proficiency. Emphasis is placed on data definition, data manipulation, and data control statements as well as on report generation. Upon completion, students should be able to write programs which create, update, and produce reports.

Prerequisites: Take CTI 110 or DBA 110 Minimum grade C

**DBA 125. Database Reporting. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0

This course provides a survey of the tools used in designing, creating and publishing database reports. Topics include both relational and XML datasets. Upon completion, students should be able to demonstrate an understanding of the different tools and frameworks used for database reporting.

Prerequisites: Take DBA 112 or CTS 130 Minimum grade C

**DBA 210. Database Administration. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0

This course covers database administration issues and distributed database concepts. Topics include database administrator (DBA) goals and functions, backup and recovery, standards and procedures, training, and database security and performance evaluations. Upon completion, students should be able to produce functional DBA documentation and administer a database.

Prerequisites: Take DBA 110 Minimum grade C

**DBA 220. Oracle Database Programming II. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0

This course is designed to enhance programming skills developed in DBA 120. Topics include application development with GUI front-ends and embedded programming. Upon completion, students should be able to develop an Oracle DBMS application which includes a GUI front-end and report generation.

Prerequisites: Take DBA 120 Minimum grade C

**DBA 221. SQL Server Database Programming II. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0

This course is designed to enhance programming skills developed in DBA 120. Topics include application development with GUI front-ends and embedded programming. Upon completion, students should be able to develop a SQL Server DBMS application which includes a GUI front-end and report generation.

Prerequisites: Take DBA 120

**DBA 285. Data Warehousing and Mining. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0

This course introduces data warehousing and data mining techniques. Emphasis is placed on data warehouse design, data transference, data cleansing, retrieval algorithms, and mining techniques. Upon completion, students should be able to create, populate, and mine a data warehouse.

Prerequisites: Take DBA 120 Minimum grade C

## Dental (DEN)

**DEN 100. Basic Orofacial Anatomy. 2.0 Credits.** Class-2.0. Clinical-0.0. Lab-0.0. Work-0.0

This course provides a basic introduction to the structures of the head, neck, and oral cavity. Topics include tooth morphology, head and neck anatomy, histology, and embryology. Upon completion, students should be able to demonstrate knowledge of normal structures and development and how they relate to the practice of dental assisting. Acceptance required into the Dental Assisting program.

**DEN 101AB. Preclinical Procedures. 3.5 Credits.** Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0

This course provides instruction in procedures for the clinical dental assistant as specified by the North Carolina Dental Practice Act. Emphasis is placed on orientation to the profession, infection control techniques, instruments, related expanded functions, and diagnostic, operative, and specialty procedures. Upon completion, students should be able to demonstrate proficiency in clinical dental assisting procedures.

**DEN 101BB. Preclinical Procedures. 3.5 Credits.** Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0

This course provides instruction in procedures for the clinical dental assistant as specified by the North Carolina Dental Practice Act. Emphasis is placed on orientation to the profession, infection control techniques, instruments, related expanded functions, and diagnostic, operative, and specialty procedures. Upon completion, students should be able to demonstrate proficiency in clinical dental assisting procedures.

**DEN 101. Preclinical Procedures. 7.0 Credits.** Class-4.0. Clinical-0.0. Lab-6.0. Work-0.0

This course provides instruction in procedures for the clinical dental assistant as specified by the North Carolina Dental Practice Act. Emphasis is placed on orientation to the profession, infection control techniques, instruments, related expanded functions, and diagnostic, operative, and specialty procedures. Upon completion, students should be able to demonstrate proficiency in clinical dental assisting procedures.

Prerequisites: Take ENG 111 COM 231 with a minimum grade of C

Take DEN 100 DEN 102 DEN 103 DEN 105 DEN 111 DEN 112

Corequisites: Take DEN 104

**DEN 102. Dental Materials. 4.0 Credits.** Class-2.0. Clinical-0.0. Lab-4.0. Work-0.0

This course provides instruction in identification, properties, evaluation of quality, principles, and procedures related to manipulation and storage of operative and specialty dental materials. Emphasis is placed on the understanding and safe application of materials used in the dental office and laboratory. Upon completion, students should be able to demonstrate proficiency in the laboratory and clinical application of routinely used dental materials.

**DEN 103AB. Dental Sciences. 1.0 Credit.** Class-1.0. Clinical-0.0. Lab-0.0. Work-0.0

This course is a study of oral pathology, pharmacology, and dental office emergencies. Topics include oral pathological conditions, dental therapeutics, and management of emergency situations. Upon completion, students should be able to recognize abnormal oral conditions, identify classifications, describe actions and effects of commonly prescribed drugs, and respond to medical emergencies.

**DEN 103BB. Dental Sciences. 1.0 Credit.** Class-1.0. Clinical-0.0. Lab-0.0. Work-0.0

This course is a study of oral pathology, pharmacology, and dental office emergencies. Topics include oral pathological conditions, dental therapeutics, and management of emergency situations. Upon completion, students should be able to recognize abnormal oral conditions, identify classifications, describe actions and effects of commonly prescribed drugs, and respond to medical emergencies.

Corequisites: Take DEN 103AB

**DEN 103. Dental Sciences. 2.0 Credits.** Class-2.0. Clinical-0.0. Lab-0.0. Work-0.0

This course is a study of oral pathology, pharmacology, and dental office emergencies. Topics include oral pathological conditions, dental therapeutics, and management of emergency situations. Upon completion, students should be able to recognize abnormal oral conditions, identify classifications, describe actions and effects of commonly prescribed drugs, and respond to medical emergencies.

**DEN 104. Dental Health Education. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0

This course covers the study of preventive dentistry to prepare dental assisting students for the role of dental health educator. Topics include etiology of dental diseases, preventive procedures, and patient education theory and practice. Upon completion, students should be able to demonstrate proficiency in patient counseling and oral health instruction in private practice or public health settings.

**DEN 105. Practice Management. 2.0 Credits.** Class-2.0. Clinical-0.0. Lab-0.0. Work-0.0

This course provides a study of principles and procedures related to management of the dental practice. Emphasis is placed on maintaining clinical and financial records, patient scheduling, and supply and inventory control. Upon completion, students should be able to demonstrate fundamental skills in dental practice management.

**DEN 106. Clinical Practice I. 6.0 Credits.** Class-2.0. Clinical-12.0. Lab-0.0. Work-0.0

This course is designed to provide experience assisting in a clinical setting. Emphasis is placed on the application of principles and procedures of four-handed dentistry and laboratory and clinical support functions.

Upon completion, students should be able to utilize classroom theory and laboratory and clinical skills in a dental setting.

Prerequisites: Take DEN 101

**DEN 107. Clinical Practice II. 5.0 Credits.** Class-1.0. Clinical-12.0. Lab-0.0. Work-0.0

This course is designed to increase the level of proficiency in assisting in a clinical setting. Emphasis is placed on the application of principles and procedures of four-handed dentistry and laboratory and clinical support functions. Upon completion, students should be able to combine theoretical and ethical principles necessary to perform entry-level skills including functions delegable to a DA II.

Prerequisites: Take DEN 106

**DEN 110. Orofacial Anatomy. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0

This course introduces the structures of the head, neck, and oral cavity. Topics include tooth morphology, head and neck anatomy, histology, and embryology. Upon completion, students should be able to relate the identification of normal structures and development to the practice of dental assisting and dental hygiene. Acceptance required into the Dental Assisting or Dental Hygiene program.

**DEN 111. Infection/Hazard Control. 2.0 Credits.** Class-2.0. Clinical-0.0. Lab-0.0. Work-0.0

This course introduces the infection and hazard control procedures necessary for the safe practice of dentistry. Topics include microbiology, practical infection control, sterilization and monitoring, chemical disinfectants, aseptic technique, infectious diseases, OSHA standards, and applicable North Carolina laws. Upon completion, students should be able to understand infectious diseases, disease transmission, infection control procedures, biohazard management, OSHA standards, and applicable North Carolina laws. Acceptance required into the Dental Assisting or Dental Hygiene program.

**DEN 112. Dental Radiography. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0

This course provides a comprehensive view of the principles and procedures of radiology as they apply to dentistry. Topics include techniques in exposing, processing, and evaluating radiographs, as well as radiation safety, quality assurance, and legal issues. Upon completion, students should be able to demonstrate proficiency in the production of diagnostically acceptable radiographs using appropriate safety precautions. Acceptance required into the Dental Assisting or Dental Hygiene program.

**DEN 120. Dental Hygiene Preclinic Lecture. 2.0 Credits.** Class-2.0. Clinical-0.0. Lab-0.0. Work-0.0

This course introduces preoperative and clinical dental hygiene concepts. Emphasis is placed on the assessment phase of patient care as well as the theory of basic dental hygiene instrumentation. Upon completion, students should be able to collect and evaluate patient data at a basic level and demonstrate knowledge of dental hygiene instrumentation. Corequisites: Take DEN 121

**DEN 121. Dental Hygiene Preclinical Lab. 2.0 Credits.** Class-0.0. Clinical-0.0. Lab-6.0. Work-0.0

This course provides the opportunity to perform clinical dental hygiene procedures discussed in DEN 120. Emphasis is placed on clinical skills in patient assessment and instrumentation techniques. Upon completion, students should be able to demonstrate the ability to perform specific preclinical procedures. Corequisites: Take DEN 120

**DEN 123. Nutrition/Dental Health. 2.0 Credits.** Class-2.0. Clinical-0.0. Lab-0.0. Work-0.0

This course introduces basic principles of nutrition with emphasis on nutritional requirements and their application to individual patient needs. Topics include the study of Federal Nutritional Guidelines, nutrient functions, Recommended Daily Allowances, Adequate Intake, Tolerable Upper Intake Level, Estimated Average Requirement, and related psychological principles. Upon completion, students should be able to recommend and counsel individuals on their food intake as related to their dental health.

**DEN 124. Periodontology. 2.0 Credits.** Class-2.0. Clinical-0.0. Lab-0.0. Work-0.0

This course provides an in-depth study of the periodontium, periodontal pathology, periodontal monitoring, and the principles of periodontal therapy. Topics include periodontal anatomy and a study of the etiology, classification, and treatment modalities of periodontal diseases. Upon completion, students should be able to describe, compare, and contrast techniques involved in periodontal/maintenance therapy, as well as patient care management.

Prerequisites: Take DEN 110 with a minimum grade of C  
Take BIO 175 or BIO 275 with a minimum grade of C

**DEN 125. Dental Office Emergencies. 1.0 Credit.** Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0

This course provides a study of the management of dental office emergencies. Topics include methods of prevention, necessary equipment/drugs, medicolegal considerations, recognition and effective initial management of a variety of emergencies. Upon completion, the student should be able to recognize, assess and manage various dental office emergencies and activate advanced medical support when indicated.

**DEN 130. Dental Hygiene Theory I. 2.0 Credits.** Class-2.0. Clinical-0.0. Lab-0.0. Work-0.0

This course is a continuation of the didactic dental hygiene concepts necessary for providing an oral prophylaxis. Topics include deposits/removal, instrument sharpening, patient education, fluorides, planning for dental hygiene treatment, charting, and clinical records and procedures. Upon completion, students should be able to demonstrate knowledge needed to complete a thorough oral prophylaxis.

Prerequisites: Take DEN 120  
Corequisites: Take DEN 131

**DEN 131. Dental Hygiene Clinic I. 3.0 Credits.** Class-0.0. Clinical-9.0. Lab-0.0. Work-0.0

This course continues skill development in providing an oral prophylaxis. Emphasis is placed on treatment of the recall patients with gingivitis or light deposits. Upon completion, students should be able to assess these patients' needs and complete the necessary dental hygiene treatment. Prerequisites: Take DEN 110 DEN 111 DEN 112 DEN 120 DEN 121 with a minimum grade of C  
Corequisites: Take DEN 130

**DEN 140. Dental Hygiene Theory II. 1.0 Credit.** Class-1.0. Clinical-0.0. Lab-0.0. Work-0.0

This course introduces principles in treatment modification. Topics include modification of treatment for pain management and advanced radiographic interpretation. Upon completion, students should be able to differentiate necessary treatment modifications and radiographic abnormalities. Introduction to the concept of power driven scalers and modification of treatment for special needs patients. Prerequisites: Take DEN 130  
Corequisites: Take DEN 141

**DEN 141. Dental Hygiene Clinic II. 2.0 Credits.** Class-0.0. Clinical-6.0. Lab-0.0. Work-0.0

This course continues skill development in providing an oral prophylaxis. Emphasis is placed on treatment of patients with early periodontal disease and subgingival deposits. Upon completion, students should be able to assess these patients' needs and complete the necessary dental hygiene treatment. Prerequisites: Take DEN 131  
Corequisites: Take DEN 140

**DEN 220. Dental Hygiene Theory III. 2.0 Credits.** Class-2.0. Clinical-0.0. Lab-0.0. Work-0.0

This course introduces advanced principles of patient care. Topics include advanced periodontal debridement, subgingival irrigation, air polishing, special needs and case presentations. Upon completion, students should be able to demonstrate knowledge of methods of treatment and management of periodontally compromised and special needs patients. Prerequisites: Take DEN 140  
Corequisites: Take DEN 221

**DEN 221. Dental Hygiene Clinic III. 4.0 Credits.** Class-0.0. Clinical-12.0. Lab-0.0. Work-0.0

This course continues skill development in providing an oral prophylaxis. Emphasis is placed on treatment of patients with moderate to advanced periodontal involvement and moderate deposits. Upon completion, students should be able to assess these patients' needs and complete the necessary dental hygiene treatment. Prerequisites: Take DEN 141  
Corequisites: Take DEN 220

**DEN 222. General & Oral Pathology. 2.0 Credits.** Class-2.0. Clinical-0.0. Lab-0.0. Work-0.0

This course provides a general knowledge of oral pathological manifestations associated with selected systemic and oral diseases. Topics include developmental and degenerative diseases, selected microbial diseases, specific and nonspecific immune and inflammatory responses with emphasis on recognizing abnormalities. Upon completion, students should be able to differentiate between normal and abnormal tissues and refer unusual findings to the dentist for diagnosis. Prerequisites: Take One: BIO 163, BIO 165, or BIO 168



**DEN 223. Dental Pharmacology. 2.0 Credits.** Class-2.0. Clinical-0.0. Lab-0.0. Work-0.0

This course provides basic drug terminology, general principles of drug actions, dosages, routes of administration, adverse reactions, and basic principles of anesthesiology. Emphasis is placed on knowledge of drugs in overall understanding of patient histories and health status. Upon completion, students should be able to recognize that each patient's general health or drug usage may require modification of the treatment procedures.

Prerequisites: Take DEN 125 with a minimum grade of C

Corequisites: Take One: BIO 163, BIO 165, or BIO 168

**DEN 224. Materials and Procedures. 2.0 Credits.** Class-1.0. Clinical-0.0. Lab-3.0. Work-0.0

This course introduces the physical properties of materials and related procedures used in dentistry. Topics include restorative and preventive materials, fabrication of casts and appliances, and chairside functions of the dental hygienist. Upon completion, students should be able to demonstrate proficiency in the laboratory and/or clinical application of routinely used dental materials and chairside functions.

Prerequisites: Take DEN 111 DEN 121 Minimum grade C

**DEN 230. Dental Hygiene Theory IV. 1.0 Credit.** Class-1.0. Clinical-0.0. Lab-0.0. Work-0.0

This course provides an opportunity to increase knowledge of the profession. Emphasis is placed on dental specialties, technological advances, and completion of a case study presentation. Upon completion, students should be able to demonstrate knowledge of various disciplines of dentistry, technological advances and principles of case presentations.

Prerequisites: Take DEN 220

Corequisites: Take DEN 231

**DEN 231. Dental Hygiene Clinic IV. 4.0 Credits.** Class-0.0. Clinical-12.0. Lab-0.0. Work-0.0

This course continues skill development in providing an oral prophylaxis. Emphasis is placed on periodontal maintenance and on treating patients with moderate to advanced/refractory periodontal disease. Upon completion, students should be able to assess these patients' needs and complete the necessary dental hygiene treatment.

Prerequisites: Take DEN 221

Corequisites: Take DEN 230

**DEN 232. Community Dental Health. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0

This course provides a study of the principles and methods used in assessing, planning, implementing, and evaluating community dental health programs. Topics include epidemiology, research methodology, biostatistics, preventive dental care, dental health education, program planning, and financing and utilization of dental services. Upon completion, students should be able to assess, plan, implement, and evaluate a community dental health program.

Prerequisites: Take DEN 123 DEN 130 and DEN 131 with a minimum grade of C

**DEN 233. Professional Development. 2.0 Credits.** Class-2.0. Clinical-0.0. Lab-0.0. Work-0.0

This course includes professional development, ethics, and jurisprudence with applications to practice management. Topics include conflict management, state laws, resumes, interviews, and legal liabilities as health care professionals. Upon completion, students should be able to demonstrate the ability to practice dental hygiene within established ethical standards and state laws.

## Design: Creative (DES)

**DES 110. Architectural Graphics. 2.0 Credits.** Class-0.0. Clinical-0.0. Lab-6.0. Work-0.0

This course introduces basic drafting skills and techniques. Emphasis is placed on the use of drafting equipment, lettering, dimensioning, elevations, sections, construction details, and design standards as related to interior design. Upon completion, students should be able to complete construction documents skillfully utilizing principles of drafting.

**DES 112. Building and Construction Systems. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course provides an overview of the residential construction process for the interior designer. Emphasis is placed on providing the fundamental knowledge needed by the designer in residential construction basics and methods, including electrical and lighting, plumbing, sustainability, mechanical and ventilation, and the building envelope. Upon completion, students should be able to demonstrate effective communication required for effective collaboration with architects, engineers, and building contractors.

Prerequisites: Take ARC 111

**DES 115. Color Theory. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0

This course introduces the element of color as a major design factor. Emphasis is placed on the physical, psychological, and other implications of color in design. Upon completion, students should be able to demonstrate knowledge of color and its effects on the human environment.

**DES 120. CAD for Interior Design. 2.0 Credits.** Class-0.0. Clinical-0.0. Lab-6.0. Work-0.0

This course introduces basic computer-aided design and drafting skills and techniques within interior design applications. Emphasis is placed on the most common computer commands used in architectural drafting and design to draw, edit, manipulate layers, and create templates. Upon completion, students should be able to use specific computer applications to complete drawings and plot/print.

Prerequisites: Take DES 110

**DES 121. CAD for Interior Design/Advanced. 2.0 Credits.** Class-0.0. Clinical-0.0. Lab-6.0. Work-0.0

This course provides advanced techniques in drafting on the computer and the applications of computer-aided design for various projects. Emphasis is placed on specific exercises that integrate and reinforce the presentation topics into a scaled drawing. Upon completion, students should be able to draw, transfer, and plot assigned floorplans in an efficient and accurate manner using the computer equipment and software provided.

Prerequisites: Take DES 120

**DES 125. Visual Presentation I. 2.0 Credits.** Class-0.0. Clinical-0.0. Lab-6.0. Work-0.0

This course introduces visual presentation techniques for communicating ideas. Topics include drawing, perspective drawing, rendering and mixed media. Upon completion, students should be able to present a design concept through graphic media.

**DES 130. Digital Applications and Interior Design. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0

This course introduces digital applications using current appropriate software and emerging technologies. Emphasis is placed on the operation of computer software in interior design applications. Upon completion, students should be able to use digital media to prepare a design solution. Focus of this course will be 3D modeling using SketchUP and/or other design software as appropriate.

**DES 135. Principles and Elements of Design I. 4.0 Credits.** Class-2.0. Clinical-0.0. Lab-4.0. Work-0.0

This course introduces the basic concepts and terminology of design as they relate to the design profession. Topics include line, pattern, space, mass, shape, texture, color, unity, variety, rhythm, emphasis, balance, proportion, scale, and function. Upon completion, students should be able to demonstrate an understanding of the principles covered through 2D and 3D exploration.

**DES 210. Professional Practices for Interior Design. 2.0 Credits.** Class-2.0. Clinical-0.0. Lab-0.0. Work-0.0

This course introduces contemporary business practices for interior design. Topics include employment skills, business formations, professional associations, preparation of professional contracts and correspondence, and means of compensation. Upon completion, students should be able to demonstrate an understanding of basic business practices as they relate to the interior design profession.

Prerequisites: Take DES 220

**DES 220. Interior Design Fundamentals. 3.0 Credits.** Class-1.0. Clinical-0.0. Lab-6.0. Work-0.0

This course provides an introduction to the application of interior design principles. Emphasis is placed on spatial relationships, material selections, craftsmanship, and visual presentation techniques. Upon completion, students should be able to apply interior design principles and illustrate design solutions through visual communication.

Prerequisites: Take One set:

- DES 135 and ARC 111
- DES 110
- DES 125
- DFT 115

**DES 225. Textiles for Interiors. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0

This course includes the study of textiles and their applications for a variety of interiors. Emphasis is placed on history, manufacturing processes, fiber characteristics, and residential and non-residential applications. Upon completion, students should be able to specify appropriate textiles.

**DES 230. Residential Design I. 3.0 Credits.** Class-1.0. Clinical-0.0. Lab-6.0. Work-0.0

This course includes principles of interior design for various residential design solutions. Emphasis is placed on visual presentation and selection of appropriate styles to meet specifications. Upon completion, students should be able to present scaled floor plans, elevations, specifications, color schemes finishes and furniture selection.

Prerequisites: Take DES 112 DES 120 DES 130 DES 220

**DES 231. Residential Design II. 3.0 Credits.** Class-1.0. Clinical-0.0. Lab-6.0. Work-0.0

This course provides advanced projects with a client profile that utilizes the skills developed in DES 230. Emphasis is placed on a total concept and the presentation of appropriate and creative design solutions. Upon completion, students should be able to complete a detailed floorplan, space planning, furniture plan, specifications, program schedules, finishes, and detailed window treatments.

Prerequisites: Take DES 230 DES 280

**DES 235. Products. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0

This course provides an overview of interior products. Topics include floor coverings; wall coverings and finishes; ceilings, moldings, and furniture construction techniques; and other interior components. Upon completion, students should be able to identify and select appropriate materials and furnishings for interior spaces based on application.

**DES 240. Commercial and Contract Design I. 3.0 Credits.** Class-1.0. Clinical-0.0. Lab-6.0. Work-0.0

This course is designed to focus on commercial/contract design including retail, office, institutional, healthcare and hospitality design. Emphasis is placed on ADA requirements, building codes and standards, space planning, and selection of appropriate materials for non-residential interiors. Upon completion, students should be able to analyze design and present non-residential projects.

Prerequisites: Take DES 112 DES 120 DES 130 and DES 220

**DES 241. Commercial/Contract Design II. 3.0 Credits.** Class-1.0. Clinical-0.0. Lab-6.0. Work-0.0

This course provides an in-depth study of non-residential design exploring more comprehensive design solutions such as health care facilities, furniture gallery design, and large office complexes. Emphasis is placed on design of commercial interiors and suitability of materials to meet ADA requirements, codes, and standards. Upon completion, students should be able to design non-residential spaces meeting ADA requirements and select furniture, materials, fabrics, and accessories meeting codes and flammability standards.

Prerequisites: Take DES 240 and DES 280

**DES 242. Kitchen and Bath Design. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0

This course covers the fundamentals of kitchen and bath design. Emphasis is placed on the principles and elements of kitchen and bath design, analysis of client needs, specifying products, and drafting design solutions. Upon completion, students should be able to produce basic kitchen and bath design utilizing standards established by the National Kitchen and Bath Association (NKBA).

Prerequisites: Take Each Group: Take ARC 111 or DES 110 Take DES 130

**DES 243. Advanced Kitchen and Bath Design. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0

This course covers advanced kitchen and bath design. Emphasis will be placed on universal design solutions, producing professional working documents, and mastery of developing and presenting a design concept and theme. Upon completion, students should be able to execute complex kitchen and bath designs.

Prerequisites: Take DES 242

**DES 255. History of Interiors and Furnishings I. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course introduces architecture, interiors, and furnishings in a variety of historic styles from Prehistoric to Neoclassical. Emphasis is placed on vocabulary, chronology, and style recognition. Upon completion, students should be able to recognize, classify and describe major styles of furniture, interiors, and architecture.

**DES 265. Lighting/Interior Design. 2.0 Credits.** Class-1.0. Clinical-0.0. Lab-2.0. Work-0.0

This course introduces theory and contemporary concepts in lighting. Topics include light levels, light quality, lamps and fixtures, and their use and application in interior design. Upon completion, students should be able to visually communicate light concepts and requirements based on national standards and select solutions for specific lighting scenarios.

**DES 275. Furniture Design & Construction. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0

This course introduces contemporary furniture design and construction techniques used in custom and handmade furniture building. Topics include design and manufacturing processes and materials selection for handmade and production, case goods, and upholstery manufacturing. Upon completion, students should be able to design and describe manufacturing processes used in both case goods and upholstered furniture manufacturing.

Prerequisites: Take DES 130 and DES 220

**DES 280. Codes and Standards/Interior Design. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course introduces standard building codes as they relate to interior design. Topics include state and federal codes and standards related to accessibility, fire codes, egress, occupancy, and plumbing requirements. Upon completion, students should be able to research and interpret and apply applicable codes.

Prerequisites: Take DES 110

## Developmental Disabilities (DDT)

**DDT 110. Developmental Disabilities. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course identifies the characteristics and causes of various disabilities. Topics include history of service provision, human rights, legislation and litigation, advocacy, and accessing support services. Upon completion, students should be able to demonstrate an understanding of current and historical developmental disability definitions and support systems used throughout the life span.

**DDT 120. Teaching Developmental Disabled. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course covers teaching modalities which enhance learning among people with developmental disabilities. Topics include assessment, support strategies, writing behavioral strategies, teaching methods, and documentation. Upon completion, students should be able to demonstrate competence in individual program plan development and implementation. DDT 120 is a requirement of the Developmental Disabilities concentration in the Human Services Technology program.

Prerequisites: Take DDT 110

**DDT 210. DDT Health Issues. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course introduces the health and medical aspects of assisting people with developmental disabilities. Topics include universal precautions, medication, wellness, nutrition, human sexuality, and accessing medical services. Upon completion, students should be able to identify and implement strategies to promote wellness and manage chronic health conditions. DDT 210 is a requirement of the Developmental Disabilities concentration in the Human Services Technology program.

Prerequisites: Take DDT 110

**DDT 220. Program Planning Process. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course covers the individual program planning process used in services for people with developmental disabilities. Topics include basic components and benefits of the process, the effect of values on outcomes, and group problem-solving methods. Upon completion, students should be able to demonstrate an understanding of effective group process in program planning and the individual roles of team members. DDT 220 is a requirement of the Developmental Disabilities concentration in the Human Services Technology program.

**DDT 230. Supported Employment. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course introduces the concept of supported employment and the action steps needed to assist individuals with disabilities to participate in the world of work. Topics include a history of vocational services, supported employment values, organizational marketing, consumer assessment, job development, employment selection, job site training and long term supports. Upon completion, students should be able to develop a customer profile, a marketing plan, and assist individuals with disabilities to obtain and maintain employment.

**DDT 240. Aging Lifelong Disability. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course is designed to address issues facing individuals with developmental disabilities who are aging. Emphasis is placed on techniques to develop coalitions between the aging network and service providers, health and wellness strategies, later life planning, and community inclusion. Upon completion, students should be able to identify formal and informal supports and strategies for community inclusion for adults aging with lifelong disabilities.

Prerequisites: Take DDT 110

## Digital Media Technology (DME)

**DME 110. Introduction to Digital Media. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0

This course introduces students to key concepts, technologies, and issues related to digital media. Topics include emerging standards, key technologies and related design issues, terminology, media formats, career paths, and ethical issues. Upon completion, students should be able to demonstrate the various media formats that are used in digital media technology.

## Drafting (DFT)

**DFT 121. Introduction to GD&T. 2.0 Credits.** Class-1.0. Clinical-0.0. Lab-2.0. Work-0.0

This course introduces basic geometric dimensioning and tolerancing principles. Topics include symbols, annotation, theory, and applications. Upon completion, students should be able to interpret and apply basic geometric dimensioning and tolerancing principles to drawings.

Prerequisites: Take DFT 111 DFT 3404 or EGR 120

**DFT 151. CAD I. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0

This course introduces CAD software as a drawing tool. Topics include drawing, editing, file management, and plotting. Upon completion, students should be able to produce and plot a CAD drawing.

**DFT 152. CAD II. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0

This course introduces extended CAD applications. Emphasis is placed upon intermediate applications of CAD skills. Upon completion, students should be able to use extended CAD applications to generate and manage drawings.

Prerequisites: Take DFT 151 or DFT 151T

**DFT 153. CAD III. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0

This course introduces advanced CAD applications. Emphasis is placed upon advanced applications of CAD skills. Upon completion, students should be able to use advanced CAD applications to generate and manage data.

Prerequisites: Take DFT 152 or DFT 154

**DFT 154. Intro to Solid Modeling. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0

This course is an introduction to basic three-dimensional solid modeling and design software. Topics include basic design, creation, editing, rendering and analysis of solid models, and creation of multiview drawings. Upon completion, students should be able to use design techniques to create, edit, render and generate a multiview drawing.

**DFT 170. Engineering Graphics. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0

This course introduces basic engineering graphics skills and applications. Topics include sketching, selection and use of current methods and tools, and the use of engineering graphics applications. Upon completion, students should be able to demonstrate an understanding of basic engineering graphics principles and practices.

Prerequisites: Take EGR 150

## Drama/Theatre (DRA)

**DRA 111. Theatre Appreciation. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course provides a study of the art, craft, and business of the theatre. Emphasis is placed on the audience's appreciation of the work of the playwright, director, actor, designer, producer, and critic. Upon completion, students should be able to demonstrate a vocabulary of theatre terms and to recognize the contributions of various theatre artists.

**DRA 112. Literature of the Theatre. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course provides a survey of dramatic works from the classical Greek through the present. Emphasis is placed on the language of drama, critical theory, and background as well as on play reading and analysis. Upon completion, students should be able to articulate, orally and in writing, their appreciation and understanding of dramatic works.

**DRA 120. Voice for Performance. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course provides guided practice in the proper production of speech for the theatre. Emphasis is placed on improving speech, including breathing, articulation, pronunciation, and other vocal variables. Upon completion, students should be able to demonstrate effective theatrical speech.

**DRA 122. Oral Interpretation. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course introduces the dramatic study of literature through performance. Emphasis is placed on analysis and performance of poetry, drama, and prose fiction. Upon completion, students should be able to embody and discuss critically the speakers inherent in literature.

**DRA 124. Readers Theatre. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course provides a theoretical and applied introduction to the medium of readers theatre. Emphasis is placed on the group performance considerations posed by various genres of literature. Upon completion, students should be able to adapt and present a literary script following the conventions of readers theatre.

**DRA 128. Children's Theatre. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course introduces the philosophy and practice involved in producing plays for young audiences. Topics include the selection of age-appropriate scripts and the special demands placed on directors, actors, designers, and educators in meeting the needs of young audiences. Upon completion, students should be able to present and critically discuss productions for children.

**DRA 130. Acting I. 3.0 Credits.** Class-0.0. Clinical-0.0. Lab-6.0. Work-0.0

This course provides an applied study of the actor's craft. Topics include role analysis, training the voice, and body concentration, discipline, and self-evaluation. Upon completion, students should be able to explore their creativity in an acting ensemble.

**DRA 131. Acting II. 3.0 Credits.** Class-0.0. Clinical-0.0. Lab-6.0. Work-0.0

This course provides additional hands-on practice in the actor's craft. Emphasis is placed on further analysis, characterization, growth, and training for acting competence. Upon completion, students should be able to explore their creativity in an acting ensemble.

Prerequisites: Take DRA 130

**DRA 132. Stage Movement. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0

This course provides an applied study of selected principles of stage movement for actors. Topics include improvisation, mime, stage combat, clowning, choreography, and masks. Upon completion, students should be able to focus properly on stage, to create characters, and to improvise scenes, perform mimes, fight, clown, juggle, and waltz.

Corequisites: Take DRA 111

**DRA 135. Acting for the Camera I. 3.0 Credits.** Class-1.0. Clinical-0.0. Lab-4.0. Work-0.0

This course provides an applied study of the camera actor's craft. Topics include commercial, dramatic, and print performance styles. Upon completion, students should be able to explore their creativity in on-camera performance.

**DRA 136. Acting for the Camera II. 3.0 Credits.** Class-1.0. Clinical-0.0. Lab-4.0. Work-0.0

This course provides additional hands-on study of the camera actor's craft. Emphasis is placed on more advanced camera acting theories, auditioning techniques, daytime drama, feature film, and print advertisement performance styles. Upon completion, students should be able to explore their creativity in on-camera performance.

Prerequisites: Take DRA 135

**DRA 140. Stagecraft I. 3.0 Credits.** Class-0.0. Clinical-0.0. Lab-6.0. Work-0.0

This course introduces the theory and basic construction of stage scenery and properties. Topics include stage carpentry, scene painting, stage electrics, properties, and backstage organization. Upon completion, students should be able to pursue vocational and avocational roles in technical theatre.

**DRA 141. Stagecraft II. 3.0 Credits.** Class-0.0. Clinical-0.0. Lab-6.0. Work-0.0

This course provides additional hands-on practice in the elements of stagecraft. Emphasis is placed on the design and implementation of the arts and crafts of technical theatre. Upon completion, students should be able to pursue vocational or avocational roles in technical theatre.

Prerequisites: Take DRA 140



**DRA 142. Costuming. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0

This course covers the techniques of costume construction and crafts processes. Emphasis is placed on learning costuming techniques, using equipment and materials, and finishing production-appropriate costumes. Upon completion, students should be able to demonstrate an understanding of pattern drafting, construction techniques, and costume fitting procedures.

**DRA 145. Stage Make-Up. 2.0 Credits.** Class-1.0. Clinical-0.0. Lab-2.0. Work-0.0

This course covers the research, design, selection of materials, and application of stage make-up, prosthetics, wigs, and hairpieces. Emphasis is placed on the development of techniques, style, and presentation of the finished make-up. Upon completion, students should be able to create and apply make-up, prosthetics, and hairpieces.

**DRA 170. Play Production I. 3.0 Credits.** Class-0.0. Clinical-0.0. Lab-9.0. Work-0.0

This course provides an applied laboratory study of the processes involved in the production of a play. Topics include fundamental practices, principles, and techniques associated with producing plays of various periods and styles. Upon completion, students should be able to participate in an assigned position with a college theatre production.

**DRA 171. Play Production II. 3.0 Credits.** Class-0.0. Clinical-0.0. Lab-9.0. Work-0.0

This course provides an applied laboratory study of the processes involved in the production of a play. Topics include fundamental practices, principles, and techniques associated with producing plays of various periods and styles. Upon completion, students should be able to participate in an assigned position with a college theatre production. Prerequisites: Take DRA 170

**DRA 211. Theatre History I. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course covers the development of theatre from its origin to the closing of the British theatre in 1642. Topics include the history, aesthetics, and representative dramatic literature of the period. Upon completion, students should be able to trace the evolution of theatre and recognize the styles and types of world drama.

**DRA 212. Theatre History II. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course covers the development of theatre from 1660 through the diverse influences which shaped the theatre of the twentieth century. Topics include the history, aesthetics, and representative dramatic literature of the period. Upon completion, students should be able to trace the evolution of theatre and recognize the styles and types of world drama.

**DRA 230. Acting III. 3.0 Credits.** Class-0.0. Clinical-0.0. Lab-6.0. Work-0.0

This course is designed to include an exploration of acting styles. Emphasis is placed on putting the actor's skills to work in a major theatrical form-musical, comedy, or drama. Upon completion, students should be able to explore their creativity in an acting ensemble. Prerequisites: Take DRA 131

**DRA 231. Acting IV. 3.0 Credits.** Class-0.0. Clinical-0.0. Lab-6.0. Work-0.0

This course is designed to include further exploration of acting styles. Emphasis is placed on putting the actor's skills to work in a major theatrical form-musical, comedy, or drama. Upon completion, students should be able to explore their creativity in an acting ensemble. Prerequisites: Take DRA 230

**DRA 240. Lighting for the Theatre. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0

This course is an applied study of theatre lighting and is designed to train theatre technicians. Emphasis is placed on lighting technology including the mechanics of lighting and light control equipment by practical work with lighting equipment. Upon completion, students should be able to demonstrate competence with lighting equipment.

**DRA 260. Directing. 3.0 Credits.** Class-0.0. Clinical-0.0. Lab-6.0. Work-0.0

This course provides an analysis and application of the techniques of theatrical directing. Topics include script selection, analysis, casting, rehearsal planning, blocking, stage business, tempo, and technical considerations. Upon completion, students should be able to plan, execute, and critically discuss a student-directed production.

Prerequisites: Take DRA 130

Corequisites: Take DRA 140

**DRA 270. Play Production III. 3.0 Credits.** Class-0.0. Clinical-0.0. Lab-9.0. Work-0.0

This course provides an applied laboratory study of the processes involved in the production of a play. Topics include fundamental practices, principles, and techniques associated with producing plays of various periods and styles. Upon completion, students should be able to participate in an assigned position with a college theatre production. Prerequisites: Take DRA 171

**DRA 271. Play Production IV. 3.0 Credits.** Class-0.0. Clinical-0.0. Lab-9.0. Work-0.0

This course provides an applied laboratory study of the processes involved in the production of a play. Topics include fundamental practices, principles, and techniques associated with producing plays of various periods and styles. Upon completion, students should be able to participate in an assigned position with a college theatre production. Prerequisites: Take DRA 270

## Economics (ECO)

**ECO 151. Survey of Economics. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course, for those who have not received credit for ECO 251 or 252, introduces basic concepts of micro- and macroeconomics. Topics include supply and demand, optimizing economic behavior, prices and wages, money, interest rates, banking system, unemployment, inflation, taxes, government spending, and international trade. Upon completion, students should be able to explain alternative solutions for economic problems faced by private and government sectors. Students needing advancement studies courses should complete those prior to taking this class. Prerequisites: Take DMA 050 MAT 121 MAT 122 MAT 171 MAT 172 MAT 263 MAT 271 MAT 272 MAT 273 or MAT 285 with a minimum grade of C Take DRE 098 or ENG 111 with a minimum grade of C

**ECO 251. Principles of Microeconomics. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course introduces economic analysis of individual, business, and industry in the market economy. Topics include the price mechanism, supply and demand, optimizing economic behavior, costs and revenue, market structures, factor markets, income distribution, market failure, and government intervention. Upon completion, students should be able to identify and evaluate consumer and business alternatives in order to efficiently achieve economic objectives. Students seeking to take this course to meet the college transfer Social/Behavioral Sciences requirement may also take ECO 252 (no ECO prerequisites).

Prerequisites: Take DMA 050 MAT 121 MAT 122 MAT 171 MAT 172 MAT 263 MAT 271 MAT 272 MAT 273 or MAT 285 with a minimum grade of C  
Take DRE 098 or ENG 111 with a minimum grade of C

**ECO 252. Principles of Macroeconomics. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course introduces economic analysis of aggregate employment, income, and prices. Topics include major schools of economic thought; aggregate supply and demand; economic measures, fluctuations, and growth; money and banking; stabilization techniques; and international trade. Upon completion, students should be able to evaluate national economic components, conditions, and alternatives for achieving socioeconomic goals. Students seeking to take this course to meet the college transfer Social/Behavioral Sciences requirement may also take ECO 251 (no ECO prerequisites).

Prerequisites: Take DMA 050 MAT 121 MAT 122 MAT 171 MAT 172 MAT 263 MAT 271 MAT 272 MAT 273 or MAT 285 with a minimum grade of C  
Take DRE 098 or ENG 111 with a minimum grade of C

## Education (EDU)

**EDU 119. Introduction to Early Childhood Education. 4.0 Credits.** Class-4.0. Clinical-0.0. Lab-0.0. Work-0.0

This course introduces the foundations of early childhood education, the diverse educational settings for young children, professionalism and planning intentional developmentally appropriate experiences for each child. Topics include theoretical foundations, national early learning standards, NC Foundations for Early Learning and Development, state regulations, program types, career options, professionalism, ethical conduct, quality inclusive environments, and curriculum responsive to the needs of each child/family. Upon completion, students should be able to design a career/professional development plan, appropriate environments, schedules, and activity plans.

**EDU 131. Child, Family, and Community. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course covers the development of partnerships between culturally, linguistically and ability diverse families, children, schools and communities through the use of evidence-based strategies. Emphasis is placed on developing skills and identifying benefits for establishing, supporting, and maintaining respectful, collaborative relationships between diverse families, programs/schools, and community agencies/resources reflective of the NAEYC Code of Ethical Conduct. Upon completion, students should be able to identify appropriate relationship building strategies between diverse families, children, schools, and communities and demonstrate a variety of communication skills including appropriate use of technology to support every child.

Corequisites: Take One: DRE 097, ENG 002, or ENG 111

**EDU 144. Child Development I. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course includes the theories of child development, observation and assessment, milestones, and factors that influence development, from conception through approximately 36 months. Emphasis is placed on knowledge, observation and assessment of developmental sequences in approaches to play/learning, emotional/social, health/physical, language/communication and cognitive domains. Upon completion, students should be able to compare/contrast typical/atypical developmental characteristics, explain biological and environmental factors that impact development, and identify evidence-based strategies for enhancing development for children that are culturally, linguistically, and ability diverse.

Corequisites: Take One: DRE 097, ENG 002, or ENG 111

**EDU 145. Child Development II. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course includes the theories of child development, observation and assessment, milestones, and factors that influence development, from preschool through middle childhood. Emphasis is placed on knowledge, observation and assessment of developmental sequences in approaches to play/learning, emotional/social, health/physical, language/communication and cognitive domains. Upon completion, students should be able to compare/contrast typical/atypical developmental characteristics, explain biological and environmental factors that impact development, and identify evidence-based strategies for enhancing development for children that are culturally, linguistically, and ability diverse.

Corequisites: Take One: DRE 097, ENG 002, or ENG 111

**EDU 146. Child Guidance. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course introduces evidence-based strategies to build nurturing relationships with each child by applying principles and practical techniques to facilitate developmentally appropriate guidance. Topics include designing responsive/supportive learning environments, cultural, linguistic and socio-economic influences on behavior, appropriate expectations, the importance of communication with children/families including using technology and the use of formative assessments in establishing intentional strategies for children with unique needs. Upon completion, students should be able to demonstrate direct/indirect strategies to encourage social skills, self-regulation, emotional expression and positive behaviors while recognizing the relationship between children's social, emotional and cognitive development.

Corequisites: Take One: DRE 097, ENG 002, or ENG 111

**EDU 151A. Creative Activities Lab. 1.0 Credit.** Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0

This course provides a laboratory component to complement EDU 151. Emphasis is placed on practical experiences that enhance concepts introduced in the classroom. Upon completion, students should be able to demonstrate a practical understanding of the development and implementation of appropriate creative activities.

Corequisites: Complete one of the following options:

- EDU 151 and DRE 097
- EDU 151 and ENG 002
- EDU 151 and ENG 111

**EDU 151. Creative Activities. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course introduces developmentally supportive creative learning environments with attention to divergent thinking, creative problem-solving, evidence-based teaching practices, and open-ended learning materials while applying NC Foundations for Early Learning and Development. Emphasis is placed on observation of process driven learning experiences in art, music, creative movement, dance, and dramatics for every young child age birth through eight, integrated through all domains and academic content. Upon completion, students should be able to examine, create, and adapt developmentally creative learning materials, experiences, and environments for children that are culturally, linguistically, and ability diverse.

Corequisites: Take DRE 097 and EDU 151A

**EDU 153. Health, Safety and Nutrition. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course covers promoting and maintaining the health and well-being of every child. Topics include health and nutritional guidelines, common childhood illnesses, maintaining safe and healthy learning environments, health benefits of active play, recognition and reporting of abuse/neglect, and state regulations. Upon completion, students should be able to apply knowledge of NC Foundations for Early Learning and Development for health, safety, nutritional needs and safe learning environments.

Corequisites: Take One: DRE 097, ENG 002, or ENG 111

**EDU 154. Social/Emotion/Behavior Development. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course covers the emotional/social development of children and the causes, expressions, prevention and management of challenging behaviors in all children. Emphasis is placed on caregiver/family/child relationships, positive emotional/social environments, developmental concerns, risk factors, and intervention strategies. Upon completion, students should be able to identify factors influencing emotional/social development, utilizing screening measures, and designing positive behavioral supports.

Prerequisites: Complete one of the following options:

- EDU 144 and EDU 145
- PSY 244 and PSY 245

Corequisites: Take One: DRE 097, ENG 002, or ENG 111

**EDU 157. Active Play. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0

This course introduces physical activities to promote the development of the whole child, birth through middle childhood. Topics include active play, outdoor learning, design of the environment, development of play skills, loose parts play, nature play, risk benefit assessment, advocacy, and family/community connection. Upon completion, students should be able to discuss the stages of play, the role of teachers in play, active play environments, advocate for the child's right to play, and plan and assess appropriate experiences using NC Foundations for Early Learning and Development.

Corequisites: Take One: DRE 097, ENG 002, or ENG 111

**EDU 158. Healthy Lifestyles-Youth. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course introduces the topics of health, safety, nutrition, physical activities and environments for the school-age child/youth that promote development, fitness and healthy lifestyles. Topics include the use of physical and nutritional/cooking activities (indoor/outdoor, teacher-directed/youth-directed) appropriate for youth developing typically/atypically; safe/healthy menu planning; safe/healthy environmental design, assessment and supervision. Upon completion, students should be able to plan/facilitate safe/healthy physical and nutritional/cooking activities, discuss safety policies/regulations and identify health/safety/nutritional needs of youth.

Corequisites: Take One: DRE 097, ENG 002, or ENG 111

**EDU 162. Observation and Assessment in Early Childhood Education. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course introduces the research, benefits, goals, and ethical considerations associated with observation and formative assessment in early childhood education. Emphasis is placed on the implementation of multiple observation/assessment strategies including anecdotal records, event samples, rating scales, and portfolios to create appropriate learning experiences. Upon completion, students should be able to practice responsible assessment and effectively use tools to assess the child, teacher practices and indoor and outdoor environments to enhance programming; and explain the importance of assessment partnerships with families and other professionals.

Corequisites: Take One: DRE 097, ENG 002, or ENG 111

**EDU 163. Classroom Management and Instruction. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course examines classroom management and evidence-based instructional strategies that create supportive learning environments to provide developmentally appropriate guidance for school-age populations. Topics include classroom management and organization, teaching strategies, individual student differences and learning styles, ongoing systematic observation, and developmentally appropriate classroom guidance techniques. Upon completion, students should be able to utilize developmentally appropriate behavior management and high quality instructional strategies that enhance the teaching/learning process and promote students' academic success.

Corequisites: Take One: DRE 097, ENG 002, or ENG 111

**EDU 184. Early Childhood Introductory Practicum. 2.0 Credits.** Class-1.0. Clinical-0.0. Lab-0.0. Work-0.0

This course introduces students to early childhood settings and applying skills in a three star (minimum) or NAEYC accredited or equivalent, quality early childhood environment. Emphasis is placed on observing children and assisting in the implementation of developmentally appropriate activities/environments for all children; and modeling reflective/professional practices. Upon completion, students should be able to demonstrate developmentally appropriate interactions with children and ethical/professional behaviors as indicated by assignments and onsite faculty visits.

Prerequisites: Take EDU 119 EDU 144 EDU 146

Corequisites: Take One: DRE 097, ENG 002, or ENG 111

**EDU 188. Issues in Early Childhood Education. 2.0 Credits.** Class-2.0. Clinical-0.0. Lab-0.0. Work-0.0

This course covers topics and issues in early childhood education. Emphasis is placed on current advocacy issues, emerging technology, professional growth experiences, and other related topics. Upon completion, students should be able to list, discuss, and explain current topics and issues in early childhood education.

Corequisites: Take one: DRE 097, ENG 002, or ENG 111

**EDU 216. Foundations of Education. 3.0 Credits.** Class-3.0.

Clinical-0.0. Lab-0.0. Work-0.0

This course introduces the examination of the American educational systems and the teaching profession. Topics include the historical and philosophical influences on education, various perspectives on educational issues, and experiences in birth through grade 12 classrooms. Upon completion, students should be able to reflect on classroom observations, analyze the different educational approaches, including classical/traditional and progressive, and have knowledge of the various roles of educational systems at the federal, state and local level.

Corequisites: Take One: DRE 098, ENG 002, or ENG 111

**EDU 221. Children With Exceptionalities. 3.0 Credits.** Class-3.0.

Clinical-0.0. Lab-0.0. Work-0.0

This course covers atypical patterns of child development, inclusive/diverse settings, evidenced-based educational/family plans, differentiated instruction, adaptive materials, and assistive technology. Emphasis is placed on the characteristics of exceptionalities and delays, early intervention/special education, transitions, observation, developmental screening, formative assessment of children, and collaborating with families and community partners. Upon completion, students should be able to recognize diverse abilities, describe the referral process, identify community resources, explain the importance of collaboration with families/professionals, and develop appropriate strategies/adaptations to support children in all environments with best practices as defined by laws, policies and the NC Foundations for Early Learning and Development.

Prerequisites: Complete one of the following options: Take EDU 119, EDU 144, and EDU 145

Take EDU 119, PSY 244, and PSY 245

Corequisites: Take One: DRE 098, ENG 002, or ENG 111

**EDU 234. Infants, Toddlers, and Twos. 3.0 Credits.** Class-3.0.

Clinical-0.0. Lab-0.0. Work-0.0

This course covers the development of high-quality, individualized, responsive/engaging relationships and experiences for infants, toddlers, and twos. Emphasis is placed on typical and atypical child development, working with diverse families to provide positive, supportive, and engaging early learning activities and interactions through field experiences and the application of the NC Foundations for Early Learning and Development. Upon completion, students should be able to demonstrate responsive curriculum planning, respectful relationships and exposure to a variety of developmentally appropriate experiences/materials that support a foundation for healthy development and growth of culturally, linguistically and ability diverse children birth to 36 months.

Prerequisites: Take EDU 119 AND EDU 144

Corequisites: Take One: DRE 098, ENG 002, or ENG 111

**EDU 235. School-Age Development and Programs. 3.0 Credits.**

Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course includes developmentally appropriate practices in group settings for school-age children. Emphasis is placed on principles of development, environmental planning, and positive guidance techniques and program development. Upon completion, students should be able to discuss developmental principles for culturally, linguistically, and ability diverse children ages five to twelve and plan and implement developmentally appropriate programs and activities.

Corequisites: Take One: DRE 098, ENG 002, or ENG 111

**EDU 243. Learning Theory. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0.

Work-0.0

This course provides lateral entry teachers an introduction to learning theory, various styles of learning, and motivational factors involved in the learning process. Emphasis is placed on the development of cognitive skills using the eight types of intelligence and applying these to practical classroom situations. Upon completion, students should be able to describe theories and styles of learning and discuss the relationship between different types of intelligence to learning motivation.

Corequisites: Take One: DRE 098, ENG 002, or ENG 111

**EDU 244. Human Growth and Development. 3.0 Credits.** Class-3.0.

Clinical-0.0. Lab-0.0. Work-0.0

This course introduces lateral entry teachers to theories and ages and stages related to human growth and development from birth through adolescence. Emphasis is placed on development through the stages of a child's life in the areas of physical, emotional, social, intellectual, and moral development. Upon completion, students should be able to identify and describe milestones of each stage in all areas of development and discuss factors that influence growth.

Corequisites: Take One: DRE 098, ENG 002, or ENG 111

**EDU 245. Policies and Procedures. 3.0 Credits.** Class-3.0. Clinical-0.0.

Lab-0.0. Work-0.0

This course is designed to introduce new lateral entry teachers to the policies and procedures established by the local education agency. Topics include emergency situation procedures, acceptable discipline, chain of command, role of mentors, evaluation procedures, employment requirements, dress codes, and other policies and procedures. Upon completion, students should be able to explain the policies and procedures to students, parents, or others and discuss the purpose of each policy category.

Corequisites: Take One: DRE 098, ENG 002, or ENG 111

**EDU 250. Teacher Licensure Preparation. 3.0 Credits.** Class-3.0.

Clinical-0.0. Lab-0.0. Work-0.0

This course provides information and strategies necessary for transfer to a teacher licensure program at a senior institution. Topics include entry level teacher licensure exam preparation, performance based assessment systems, requirements for entry into teacher education programs, the process to become a licensed teacher in North Carolina, and professionalism including expectations within the field of education. Upon completion, students should be able to utilize educational terminology and demonstrate knowledge of teacher licensure processes including exam preparation, technology based portfolio assessment, and secondary admissions processes to the school of education at a senior institution.

Corequisites: Complete one of the following options:

- ENG 111 and MAT 143
- ENG 111 and MAT 152
- ENG 111 and MAT 171

**EDU 251. Exploration Activities. 3.0 Credits.** Class-3.0. Clinical-0.0.

Lab-0.0. Work-0.0

This course covers fundamental concepts in the content areas of science, technology, engineering, math and social studies through investigative experiences. Emphasis is placed on exploring fundamental concepts, developmentally appropriate scope and sequence, and teaching strategies to engage each child in the discovery approach. Upon completion, students should be able to understand major concepts in each content area and implement appropriate experiences for young children.

Prerequisites: Take EDU 119, EDU 144, EDU 151, and EDU 151A

Corequisites: Take DRE 098 and EDU 251A



**EDU 251A. Exploration Activities Lab. 1.0 Credit.** Class-0.0.

Clinical-0.0. Lab-2.0. Work-0.0

This course provides a laboratory component to practice content knowledge gained from EDU 251. Emphasis is placed on practical experience that enhances the fundamental concepts. Upon completion, students should be able to demonstrate the discovery approach to teaching and plan appropriate science, technology, engineering, math, and social studies experiences for each child.

Prerequisites: Take EDU 119, EDU 144, EDU 151, and EDU 151A

Corequisites: Take one set:

- EDU 251 and DRE 098
- EDU 251 and ENG 002
- EDU 251 and ENG 111

**EDU 254. Music and Movement for Children. 2.0 Credits.** Class-1.0.

Clinical-0.0. Lab-2.0. Work-0.0

This course covers the use of music and creative movement for children. Topics include a general survey of the basic elements of music and planning, designing, and implementing music and movement experiences for creative learning. Upon completion, students should be able to use voice and various musical instruments to provide musical and movement activities for children.

**EDU 259. Curriculum Planning. 3.0 Credits.** Class-3.0. Clinical-0.0.

Lab-0.0. Work-0.0

This course is designed to focus on using content knowledge to build developmentally effective approaches for culturally/linguistically/ability diverse young children. Topics include components of curriculum, a variety of curriculum models, authentic observation and assessment, and planning developmentally appropriate experiences aligned with the NC Foundations for Early Learning and Development. Upon completion, students should be able to understand, evaluate, and use curriculum to plan for individual/group needs.

Prerequisites: Take EDU 119, EDU 145, EDU 151, EDU 151A, and EDU 184

Corequisites: Take One: DRE 098, ENG 002, or ENG 111

**EDU 261. Early Childhood Administration I. 3.0 Credits.** Class-3.0.

Clinical-0.0. Lab-0.0. Work-0.0

This course introduces principles and practices essential to preparing and supporting child care administrators. Topics include program philosophy, policies and procedures, NC Child Care Law and Rules, business planning, personnel and fiscal management, and NAEYC Code of Ethical Conduct Supplement for Early Childhood Program Administration. Upon completion, students should be able to articulate a developmentally appropriate program philosophy, locate current state licensing regulations, analyze a business plan and examine comprehensive program policies and procedures.

Corequisites: Take one set:

- EDU 119 and DRE 098
- EDU 119 and ENG 002
- EDU 119 and ENG 111

**EDU 262. Early Childhood Administration II. 3.0 Credits.** Class-3.0.

Clinical-0.0. Lab-0.0. Work-0.0

This course focuses on advocacy/leadership, public relations/community outreach and program quality/evaluation for diverse early childhood programs. Topics include program evaluation/accreditation, involvement in early childhood professional organizations, leadership/mentoring, family, volunteer and community involvement and early childhood advocacy.

Upon completion, students should be able to define and evaluate all components of early childhood programs, develop strategies for advocacy and integrate community into programs.

Prerequisites: Take one set:

- DRE 098, EDU 119 and EDU 261
- ENG 002, EDU 119 and EDU 261
- ENG 111, EDU 119 and EDU 261

**EDU 263. School-Age Program Administration. 2.0 Credits.** Class-2.0.

Clinical-0.0. Lab-0.0. Work-0.0

This course introduces the methods and procedures for development and administration of school-age programs in the public or proprietary setting. Emphasis is placed on the construction and organization of the physical environment. Upon completion, students should be able to plan, develop and administer a quality school-age program.

Corequisites: Take One: DRE 098, ENG 002, or ENG 111

**EDU 271. Educational Technology. 3.0 Credits.** Class-2.0. Clinical-0.0.

Lab-2.0. Work-0.0

This course introduces the ethical use of technology to enhance teaching and learning in all educational settings. Emphasis is placed on technology concepts, ethical issues, digital citizenship, instructional strategies, assistive technology, and the use of technology for professional development and communication. Upon completion, students should be able to discuss technology concepts, ethically use a variety of technology resources, demonstrate appropriate technology skills in educational environments, and identify assistive technology.

Prerequisites: Take EDU 221

Corequisites: Take One: DRE 098, ENG 002, or ENG 111

**EDU 280A. Literacy Experiences Lab. 1.0 Credit.** Class-0.0. Clinical-0.0.

Lab-2.0. Work-0.0

This course provides a laboratory component to complement EDU 280. Emphasis is placed on practical experiences that enhance concepts introduced in the classroom. Upon completion, students should be able to demonstrate a practical understanding of the development and implementation of appropriate early literacy experiences.

Prerequisites: Take EDU 119 EDU 144 EDU 151 EDU 151A

Corequisites: Complete one of the following options:

- EDU 280 and DRE 098
- EDU 280 and ENG 002
- EDU 280 and ENG 111

**EDU 280. Language and Literacy Experiences. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course provides evidence-based strategies for enhancing language and literacy experiences that align with NC Foundations for Early Learning and Development. Topics include developmental sequences for children's emergent receptive and expressive language, print concepts, appropriate observations/assessments, literacy enriched environments, quality selection of diverse literature, interactive media, and inclusive practices. Upon completion, students should be able to select, plan, implement and evaluate developmentally appropriate language and literacy experiences for children who are culturally, linguistically and ability diverse.

Prerequisites: Take EDU 119 EDU 144 EDU 151 EDU 151A

Corequisites: Take One: DRE 098, ENG 002, or ENG 111

**EDU 284. Early Childhood Capstone Practicum. 4.0 Credits.** Class-1.0. Clinical-0.0. Lab-9.0. Work-0.0

This course is designed to allow students to demonstrate acquired skills in a three star (minimum) or NAEYC accredited or equivalent, quality early childhood environment. Emphasis is placed on designing, implementing and evaluating developmentally appropriate activities and environments for all children; supporting/engaging families; and modeling reflective and professional practices based on national and state guidelines. Upon completion, students should be able to apply NC Foundations for Early Learning and Development to demonstrate developmentally appropriate plans/assessments, appropriate guidance techniques and ethical/professional behaviors, including the use of appropriate technology, as indicated by assignments and onsite faculty assessments.

Prerequisites: Complete one of the following options: Take EDU 119, EDU 144, EDU 145, EDU 146, and EDU 151

Take EDU 119, EDU 145, EDU 146, EDU 151, and PSY 244

Take EDU 119, EDU 144, EDU 146, EDU 151, and PSY 245

Take EDU 119, EDU 146, EDU 151, PSY 244, and PSY 245

Corequisites: Take One: DRE 098, ENG 002, or ENG 111

**EDU 288. Advanced Issues in Early Childhood Education. 2.0 Credits.** Class-2.0. Clinical-0.0. Lab-0.0. Work-0.0

This course covers advanced topics and issues in early childhood. Emphasis is placed on current advocacy issues, emerging technology, professional growth experiences, and other related topics. Upon completion, students should be able to list, discuss, and explain advanced current topics and issues in early childhood education.

Corequisites: Take One: DRE 098, ENG 002, or ENG 111

## Electric Utility Substation (EUS)

**EUS 110. Introduction to Electric Utility Industry. 4.0 Credits.** Class-3.0. Clinical-0.0. Lab-3.0. Work-0.0

This course provides the student with an overview of the electric (power) utility industry. Topics include electric utility regulation and its scope, regulatory agencies and codes, electrical safety, electric system overview, electric generation, electric transmission, and electric distribution. Upon completion, students should be able to understand the need for electric utilities, their structure, and regulatory requirements on electric utilities.

## Electrical (ELC)

**ELC 111. Introduction to Electricity. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0

This course introduces the fundamental concepts of electricity and test equipment to non-electrical/electronics majors. Topics include basic DC and AC principles (voltage, resistance, current, impedance); components (resistors, inductors, and capacitors); power; and operation of test equipment. Upon completion, students should be able to construct and analyze simple DC and AC circuits using electrical test equipment.

**ELC 112. DC/AC Electricity. 5.0 Credits.** Class-3.0. Clinical-0.0. Lab-6.0. Work-0.0

This course introduces the fundamental concepts of and computations related to DC/AC electricity. Emphasis is placed on DC/AC circuits, components, operation of test equipment; and other related topics. Upon completion, students should be able to construct, verify, and analyze simple DC/AC circuits.

**ELC 113. Residential Wiring. 4.0 Credits.** Class-2.0. Clinical-0.0. Lab-6.0. Work-0.0

This course introduces the care/usage of tools and materials used in residential electrical installations and the requirements of the National Electrical Code. Topics include NEC, electrical safety, and electrical print reading; planning, layout; and installation of electrical distribution equipment; lighting; overcurrent protection; conductors; branch circuits; and conduits. Upon completion, students should be able to properly install conduits, wiring, and electrical distribution equipment associated with residential electrical installations.

**ELC 114. Commercial Wiring. 4.0 Credits.** Class-2.0. Clinical-0.0. Lab-6.0. Work-0.0

This course provides instruction in the application of electrical tools, materials, and test equipment associated with commercial electrical installations. Topics include the NEC; safety; electrical blueprints; planning, layout, and installation of equipment and conduits; and wiring devices such as panels and overcurrent devices. Upon completion, students should be able to properly install equipment and conduit associated with commercial electrical installations.

**ELC 115. Industrial Wiring. 4.0 Credits.** Class-2.0. Clinical-0.0. Lab-6.0. Work-0.0

This course covers layout, planning, and installation of wiring systems in industrial facilities. Emphasis is placed on industrial wiring methods and materials. Upon completion, students should be able to install industrial systems and equipment.

**ELC 117. Motors and Controls. 4.0 Credits.** Class-2.0. Clinical-0.0. Lab-6.0. Work-0.0

This course introduces the fundamental concepts of motors and motor controls. Topics include ladder diagrams, pilot devices, contactors, motor starters, motors, and other control devices. Upon completion, students should be able to properly select, connect, and troubleshoot motors and control circuits.

**ELC 118. National Electrical Code. 2.0 Credits.** Class-1.0. Clinical-0.0. Lab-2.0. Work-0.0

This course covers the use of the current National Electrical Code. Topics include the NEC history, wiring methods, overcurrent protection, materials, and other related topics. Upon completion, students should be able to effectively use the NEC.

**ELC 119. NEC Calculations. 2.0 Credits.** Class-1.0. Clinical-0.0. Lab-2.0. Work-0.0

This course covers branch circuit, feeder, and service calculations. Emphasis is placed on sections of the National Electrical Code related to calculations. Upon completion, students should be able to use appropriate code sections to size wire, conduit, and overcurrent devices for branch circuits, feeders, and service.

**ELC 121. Electrical Estimating. 2.0 Credits.** Class-1.0. Clinical-0.0. Lab-2.0. Work-0.0

This course covers the principles involved in estimating electrical projects. Topics include take-offs of materials and equipment, labor, overhead, and profit. Upon completion, students should be able to estimate simple electrical projects.

**ELC 125. Diagrams and Schematics. 2.0 Credits.** Class-1.0. Clinical-0.0. Lab-2.0. Work-0.0

This course covers the interpretation of electrical diagrams, schematics, and drawings common to electrical applications. Emphasis is placed on reading and interpreting electrical diagrams and schematics. Upon completion, students should be able to read and interpret electrical diagrams and schematics.

**ELC 127. Software for Technicians. 2.0 Credits.** Class-1.0. Clinical-0.0. Lab-3.0. Work-0.0

This course introduces computer software which can be used to solve electrical/electronics problems. Topics include electrical/electronics calculations and applications. Upon completion, students should be able to utilize a personal computer for electrical/electronics-related applications.

**ELC 128. Introduction to Programmable Logic Controller. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0

This course introduces the programmable logic controller (PLC) and its associated applications. Topics include ladder logic diagrams, input/output modules, power supplies, surge protection, selection/installation of controllers, and interfacing of controllers with equipment. Upon completion, students should be able to understand basic PLC systems and create simple programs.

**ELC 130. Advanced Motors and Controls. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0

This course covers motors concepts, construction and characteristics and provides a foundation in motor controls. Topics include motor control ladder logic, starters, timers, overload protection, braking, reduced voltage starting, SCR control, AC/DC drives, system and component level troubleshooting. Upon completion, students should be able to specify, connect, control, troubleshoot, and maintain motors and motor control systems.

Prerequisites: Take One: ELC 111, ELC 112, ELC 131, or ELC 138

**ELC 131. Circuit Analysis I. 4.0 Credits.** Class-3.0. Clinical-0.0. Lab-3.0. Work-0.0

This course introduces DC and AC electricity with an emphasis on circuit analysis, measurements, and operation of test equipment. Topics include DC and AC principles, circuit analysis laws and theorems, components, test equipment operation, circuit simulation, and other related topics. Upon completion, students should be able to interpret circuit schematics; design, construct, verify, and analyze DC/AC circuits; and properly use test equipment.

Corequisites: Take MAT 121 or MAT 171

**ELC 133. Circuit Analysis II. 4.0 Credits.** Class-3.0. Clinical-0.0. Lab-3.0. Work-0.0

This course covers additional concepts of DC/AC electricity, the use of test equipment, and measurement techniques. Topics include the application of network theorems such as delta/gye transformations, Superposition Theorem, and other advanced circuit analysis principles. Upon completion, students should be able to construct and analyze DC/AC circuits used advanced circuit analysis theorems, circuit simulators, and test equipment. Prerequisites: Take ELC 131 Minimum grade C

**ELC 135. Electrical Machines. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0

This course covers magnetic circuits, transformers, DC/AC machines, and the three-phase circuit fundamentals including power factor. Topics include magnetic terms and calculations, transformer calculations based on primary or secondary equivalent circuits, and regulation and efficiency calculations. Upon completion, students should be able to perform regulation and efficiency calculations for DC/AC machine circuits. Prerequisites: Take ELC 139 or ELC 131 Minimum grade C

**ELC 136. Electrical Machines II. 4.0 Credits.** Class-3.0. Clinical-0.0. Lab-3.0. Work-0.0

This course covers DC/AC machine fundamentals including applications and control. Topics include control devices and induction single and polyphase AC motors, DC motors, stepper, and special purpose motors. Upon completion, students should be able to perform regulation and efficiency calculations and apply motor theory to practical control applications. Prerequisites: Take ELC 135 Minimum grade C

**ELC 138. DC Circuit Analysis. 4.0 Credits.** Class-3.0. Clinical-0.0. Lab-3.0. Work-0.0

This course introduces DC electricity with an emphasis on circuit analysis, measurements, and operation of test equipment. Topics include DC principles, circuit analysis laws and theorems, components, test equipment operation, circuit simulation, and other related topics. Upon completion, students should be able to interpret circuit schematics; design, construct, and analyze DC circuits; and properly use test equipment.

**ELC 139. AC Circuit Analysis. 4.0 Credits.** Class-3.0. Clinical-0.0. Lab-3.0. Work-0.0

This course introduces AC electricity with an emphasis on circuit analysis, measurements, and operation of test equipment. Topics include AC voltages, circuit analysis laws and theorems, reactive components and circuits, transformers, test equipment operation, circuit simulation, and other related topics. Upon completion, students should be able to interpret AC circuit schematics; analyze and troubleshoot AC circuits; and properly use test equipment.

Prerequisites: Take ELC 138

**ELC 213. Instrumentation. 4.0 Credits.** Class-3.0. Clinical-0.0. Lab-2.0. Work-0.0

This course covers the fundamentals of instrumentation used in industry. Emphasis is placed on electric, electronic, and other instruments. Upon completion, students should be able to install, maintain, and calibrate instrumentation.

Prerequisites: Take ELC 131 Minimum grade C

**ELC 215. Electrical Maintenance. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0

This course introduces the theory of maintenance and the skills necessary to maintain electrical equipment found in industrial and commercial facilities. Topics include maintenance theory, predictive and preventive maintenance, electrical equipment operation and maintenance, and maintenance documentation. Upon completion, students should be able to perform maintenance on electrical equipment in industrial and commercial facilities.

**ELC 220. Photovoltaic System Technology. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0

This course introduces the concepts, tools, techniques, and materials needed to understand systems that convert solar energy into electricity with photovoltaic (pv) technologies. Topics include site analysis for system integration, building codes, and advances in photovoltaic technology. Upon completion, students should be able to demonstrate an understanding of the principles of photovoltaic technology and current applications.

**ELC 221. Advanced Photovoltaic System Designs. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0

This course introduces specific elements in photovoltaic (pv) systems technologies including efficiency, modules, inverters, charge controllers, batteries, and system installation. Topics include National Electrical Code (NEC), electrical specifications, photovoltaic system components, array design and power integration requirements that combine to form a unified structure. Upon completion, students should be able to demonstrate an understanding of various photovoltaic designs and proper installation of NEC compliant solar electric power systems.

Prerequisites: Take ELC 220

**ELC 228. Programmable Logic Controllers Applications. 4.0 Credits.** Class-2.0. Clinical-0.0. Lab-6.0. Work-0.0

This course covers programming and applications of programmable logic controllers. Emphasis is placed on programming techniques, networking, specialty I/O modules, and system troubleshooting. Upon completion, students should be able to specify, implement, and maintain complex PLC controlled systems.

**ELC 229. Applications Project. 2.0 Credits.** Class-1.0. Clinical-0.0. Lab-3.0. Work-0.0

This course provides an individual and/or integrated team approach to a practical project as approved by the instructor. Topics include project selection and planning, implementation and testing, and a final presentation. Upon completion, students should be able to plan and implement an applications-oriented project.

**ELC 230. Wind and Hydro Power Systems. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0

This course introduces concepts, designs, tools, techniques, and material requirements for systems that convert wind and water into usable energy. Topics include the analysis, measurement, and estimation of potential energy of wind and water systems. Upon completion, students should be able to demonstrate an understanding of the technologies associated with converting wind and water into a viable energy source.

**ELC 231. Electric Power Systems. 4.0 Credits.** Class-3.0. Clinical-0.0. Lab-2.0. Work-0.0

This course covers the basic principles of electric power systems, including transmission lines, generator and transformer characteristics, and fault detection and correction. Emphasis is placed on line diagrams and per unit calculations for circuit performance analysis in regards to voltage regulation, power factor, and protection devices. Upon completion, students should be able to analyze simple distribution subsystems, calculate fault current, and compare different types and sizes of circuit protection devices.

Prerequisites: Take ELC 135 Minimum grade C

**ELC 233. Energy Management. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0

This course covers energy management principles and techniques typical of those found in industry and commercial facilities, including load control and peak demand reduction systems. Topics include load and peak demand calculations, load shedding, load balance and power factor, priority scheduling, remote sensing and control, and supplementary/alternative energy sources. Upon completion, students should be able to determine energy management parameters, calculate demand and energy use, propose energy management procedures, and implement alternative energy sources.

Corequisites: Take ELC 139

**ELC 234. Electrical System Design. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0

This course introduces the principles of electrical design for commercial and industrial facilities. Topics include services, high and low power distribution, switchboards, panelboards, motor control centers, switchgear, overcurrent protection, and grounding. Upon completion, students should be able to design services, feeders, and branch circuits for typical commercial/industrial applications in accordance with the National Electrical Code.

**ELC 1124. Electrical. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course is reserved for a freshmen-level course from an institution of the UNC System, contracted to be provided for a community college. The college should enter the course prefix/number, title, distribution of hours, prerequisites, corequisites, and course description as it appears in the UNC institution catalog. Upon successful completion, students should have earned 3 hours of credit equivalent to the course offered at the UNC institution.

## Electronic Commerce (ECM)

**ECM 210. Introduction to E-Commerce. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0

This course introduces the concepts and tools to implement electronic commerce via the Internet. Topics include application and server software selection, securing transactions, use and verification of credit cards, publishing of catalogs, and site administration. Upon completion, students should be able to setup a working e-commerce Internet web site.

Prerequisites: Complete one of the following options: Take DRE 098

Take EFL 111 EFL 112 with a minimum grade of C

Take ENG 111 with a minimum grade of C



## Electronics (ELN)

**ELN 131. Analog Electronics I. 4.0 Credits.** Class-3.0. Clinical-0.0. Lab-3.0. Work-0.0

This course introduces the characteristics and applications of semiconductor devices and circuits. Emphasis is placed on analysis, selection, biasing, and applications. Upon completion, students should be able to construct, analyze, verify, and troubleshoot analog circuits using appropriate techniques and test equipment.

Prerequisites: Take ELC 131 Minimum grade C

**ELN 132. Analog Electronics II. 4.0 Credits.** Class-3.0. Clinical-0.0. Lab-3.0. Work-0.0

This course covers additional applications of analog electronic circuits with an emphasis on analog and mixed signal integrated circuits (IC). Topics include amplification, filtering, oscillation, voltage regulation, and other analog circuits. Upon completion, students should be able to construct, analyze, verify, and troubleshoot analog electronic circuits using appropriate techniques and test equipment.

**ELN 133. Digital Electronics. 4.0 Credits.** Class-3.0. Clinical-0.0. Lab-3.0. Work-0.0

This course covers combinational and sequential logic circuits. Topics include number systems, Boolean algebra, logic families, medium scale integration (MSI) and large scale integration (LSI) circuits, analog to digital (AD) and digital to analog (DA) conversion, and other related topics. Upon completion, students should be able to construct, analyze, verify, and troubleshoot digital circuits using appropriate techniques and test equipment.

**ELN 150. Computer-Aided Drafting for Electronics. 2.0 Credits.** Class-1.0. Clinical-0.0. Lab-3.0. Work-0.0

This course introduces computer-aided drafting (CAD) with an emphasis on applications in the electronics field. Topics include electronics industry standards (symbols, schematic diagrams, layouts); drawing electronic circuit diagrams; and specialized electronic drafting practices and components such as resistors, capacitors, and ICs. Upon completion, students should be able to prepare electronic drawings with CAD software.

**ELN 232. Introduction to Microprocessors. 4.0 Credits.** Class-3.0. Clinical-0.0. Lab-3.0. Work-0.0

This course introduces microprocessor architecture and microcomputer systems including memory and input/output interfacing. Topics include low-level language programming, bus architecture, I/O systems, memory systems, interrupts, and other related topics. Upon completion, students should be able to interpret, analyze, verify, and troubleshoot fundamental microprocessor circuits and programs using appropriate techniques and test equipment.

Prerequisites: Take ELN 133 Minimum grade C

**ELN 233. Microprocessor Systems. 4.0 Credits.** Class-3.0. Clinical-0.0. Lab-3.0. Work-0.0

This course covers the application and design of microprocessor control systems. Topics include control and interfacing of systems using AD/DA, serial/parallel I/O, communication protocols, and other related applications. Upon completion, students should be able to design, construct, program, verify, analyze, and troubleshoot fundamental microprocessor interface and control circuits using related equipment.

Prerequisites: Take ELN 232

**ELN 237. Local Area Networks. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0

This course introduces the fundamentals of local area networks and their operation. Topics include the characteristics of network topologies, system hardware, system configuration, installation and operation of the LAN. Upon completion, students should be able to install and maintain a local area network.

Prerequisites: Take ELN 133

**ELN 260. Prog Logic Controllers. 4.0 Credits.** Class-3.0. Clinical-0.0. Lab-3.0. Work-0.0

This course provides a detailed study of PLC applications, with a focus on design of industrial controls using the PLC. Topics include PLC components, memory organization, math instructions, documentation, input/output devices, and applying PLCs in industrial control systems. Upon completion, students should be able to select and program a PLC system to perform a wide variety of industrial control functions.

Prerequisites: Take ELC 213 or ELN 133 with a minimum grade C

## Emergency Medical Science (EMS)

**EMS 110AB. EMT. 4.0 Credits.** Class-3.0. Clinical-0.0. Lab-3.0. Work-0.0

This course introduces basic emergency medical care. Topics include preparatory, airway, patient assessment, medical emergencies, trauma, infants and children, and operations. Upon completion, students should be able to demonstrate the knowledge and skills necessary to achieve North Carolina State or National Registry EMT certification.

**EMS 110BB. EMT. 4.0 Credits.** Class-3.0. Clinical-0.0. Lab-3.0. Work-0.0

This course introduces basic emergency medical care. Topics include preparatory, airway, patient assessment, medical emergencies, trauma, infants and children, and operations. Upon completion, students should be able to demonstrate the knowledge and skills necessary to achieve North Carolina State or National Registry EMT certification.

Corequisites: Take EMS 110AB

**EMS 110. EMT. 8.0 Credits.** Class-6.0. Clinical-0.0. Lab-6.0. Work-0.0

This course introduces basic emergency medical care. Topics include preparatory, airway, patient assessment, medical emergencies, trauma, infants and children, and operations. Upon completion, students should be able to demonstrate the knowledge and skills necessary to achieve North Carolina State or National Registry EMT certification.

**EMS 120. Advanced EMT. 6.0 Credits.** Class-4.0. Clinical-0.0. Lab-6.0. Work-0.0

This course is designed to provide the essential information on interventions/treatments appropriate to the Advanced EMT and is required for Advanced EMT certification. Topics include airway management, automatic external defibrillation, cardiac electrophysiology, vascular access, acid-base balance, pharmacology, medical emergencies, traumatic injuries, and fluids and electrolytes. Upon completion, students should be able to properly obtain vascular access, manage medical and trauma patients, utilize simple and advanced airways, and correctly interpret arterial blood gases.

Prerequisites: Take EMS 110

Corequisites: Take EMS 121

**EMS 121. AEMT Clinical Practicum. 2.0 Credits.** Class-0.0. Clinical-6.0. Lab-0.0. Work-0.0

This course provides the hospital and field internship/clinical experiences required in preparation for the Advanced EMT certification. Emphasis is placed on performing patient assessments, treatments, and interactions appropriate at the Advanced EMT level of care. Upon completion, students should be able to demonstrate competence at the Advanced EMT skill level.

Prerequisites: Take EMS 110

Corequisites: Take EMS 120

**EMS 122. EMS Clinical Practicum I. 1.0 Credit.** Class-0.0. Clinical-3.0. Lab-0.0. Work-0.0

This course provides the introductory hospital clinical experience for the paramedic student. Emphasis is placed on mastering fundamental paramedic skills. Upon completion, students should be able to demonstrate competence with fundamental paramedic level skills.

Prerequisites: Take EMS 110

Corequisites: Take EMS 130

**EMS 125. EMS Instructor Methodology. 2.0 Credits.** Class-1.0. Clinical-0.0. Lab-2.0. Work-0.0

This course covers the information needed to develop and instruct EMS courses. Topics include instructional methods, lesson plan development, time management skills, and theories of adult learning. Upon completion, students should be able to teach EMS courses and meet the North Carolina EMS requirements for instructor methodology.

**EMS 130. Pharmacology. 4.0 Credits.** Class-3.0. Clinical-0.0. Lab-3.0. Work-0.0

This course introduces the fundamental principles of pharmacology and medication administration and is required for paramedic certification. Topics include medical terminology, pharmacological concepts, weights, measures, drug calculations, vascular access for fluids and medication administration and legislation. Upon completion, students should be able to accurately calculate drug dosages, properly administer medications, and demonstrate general knowledge of pharmacology.

Prerequisites: Take EMS 110

Corequisites: Take EMS 122

**EMS 131. Advanced Airway Management. 2.0 Credits.** Class-1.0. Clinical-0.0. Lab-2.0. Work-0.0

This course is designed to provide advanced airway management techniques and is required for paramedic certification. Topics include respiratory anatomy and physiology, airway/ventilation, adjuncts, surgical intervention, and rapid sequence intubation. Upon completion, students should be able to properly utilize all airway adjuncts and pharmacology associated with airway control and maintenance.

Prerequisites: Take EMS 110

**EMS 140. Rescue Scene Management. 2.0 Credits.** Class-1.0. Clinical-0.0. Lab-3.0. Work-0.0

This course introduces rescue scene management. Topics include response to hazardous material conditions, incident command, and extrication of patients from a variety of situations. Upon completion, students should be able to recognize and manage rescue operations based upon initial and follow-up scene assessment.

**EMS 150. Emergency Vehicles and EMS Communication. 2.0 Credits.** Class-1.0. Clinical-0.0. Lab-3.0. Work-0.0

This course covers the principles governing emergency vehicles, maintenance of emergency vehicles, and EMS communication equipment. Topics include applicable motor vehicle laws affecting emergency vehicle operation, defensive driving, collision avoidance techniques, communication systems, and information management systems. Upon completion, students should have a basic knowledge of emergency vehicles, maintenance, and communication needs.

**EMS 160AB. Cardiology I. 1.0 Credit.** Class-0.5. Clinical-0.0. Lab-1.5. Work-0.0

This course introduces the study of cardiovascular emergencies and is required for paramedic certification. Topics include anatomy and physiology, pathophysiology, electrophysiology, and basic rhythm interpretation in the monitoring leads. Upon completion, students should be able to recognize and interpret basic rhythms. This is the first part of a two course sequence.

Prerequisites: Take EMS 110

**EMS 160BB. Cardiology I. 1.0 Credit.** Class-0.5. Clinical-0.0. Lab-1.5. Work-0.0

This course introduces the study of cardiovascular emergencies and is required for paramedic certification. Topics include anatomy and physiology, pathophysiology, electrophysiology, and basic rhythm interpretation in the monitoring leads. Upon completion, students should be able to recognize and interpret basic rhythms. This is the second part of a two course sequence.

Prerequisites: Take EMS 110

Corequisites: Take EMS 160AB

**EMS 160. Cardiology I. 2.0 Credits.** Class-1.0. Clinical-0.0. Lab-3.0. Work-0.0

This course introduces the study of cardiovascular emergencies and is required for paramedic certification. Topics include anatomy and physiology, pathophysiology, electrophysiology, and basic rhythm interpretation in the monitoring leads. Upon completion, students should be able to recognize and interpret basic rhythms.

Prerequisites: Take EMS 110

**EMS 220. Cardiology II. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0

This course provides an in-depth study of cardiovascular emergencies and is required for paramedic certification. Topics include assessment and treatment of cardiac emergencies, application and interpretation of advanced electrocardiography utilizing the twelve-lead ECG, cardiac pharmacology, and patient care. Upon completion, students should be able to assess and treat patients utilizing American Heart Association guidelines.

Prerequisites: Take All: EMS 122, EMS 130, and EMS 160

**EMS 221. EMS Clinical Practicum II. 2.0 Credits.** Class-0.0. Clinical-6.0. Lab-0.0. Work-0.0

This course provides clinical experiences in the hospital and/or field. Emphasis is placed on increasing the proficiency of students' skills and abilities in patient assessments and the delivery of care. Upon completion, students should be able to demonstrate continued progress in advanced-level patient care.

Prerequisites: Take All: EMS 122 and EMS 130

**EMS 231AB. EMS Clinical Practicum III. 1.5 Credit.** Class-0.0. Clinical-4.5. Lab-0.0. Work-0.0

This course provides clinical experiences in the hospital and/or field. Emphasis is placed on enhancing the students' skills and abilities in providing advanced-level care. Upon completion, students should be able to demonstrate continued progress in advanced-level patient care. Prerequisites: Take All: EMS 130 and EMS 221

**EMS 231BB. EMS Clinical Practicum III. 1.5 Credit.** Class-0.0. Clinical-4.5. Lab-0.0. Work-0.0

This course provides clinical experiences in the hospital and/or field. Emphasis is placed on enhancing the students' skills and abilities in providing advanced-level care. Upon completion, students should be able to demonstrate continued progress in advanced-level patient care. Prerequisites: Take All: EMS 130 and EMS 221  
Corequisites: Take EMS 231AB

**EMS 231. EMS Clinical Practicum III. 3.0 Credits.** Class-0.0. Clinical-9.0. Lab-0.0. Work-0.0

This course provides clinical experiences in the hospital and/or field. Emphasis is placed on enhancing the students' skills and abilities in providing advanced-level care. Upon completion, students should be able to demonstrate continued progress in advanced-level patient care. Prerequisites: Take All: EMS 130 and EMS 221

**EMS 235. EMS Management. 2.0 Credits.** Class-2.0. Clinical-0.0. Lab-0.0. Work-0.0

This course stresses the principles of managing a modern emergency medical service system. Topics include structure and function of municipal governments, EMS grantsmanship, finance, regulatory agencies, system management, legal issues, and other topics relevant to the EMS manager. Upon completion, students should be able to understand the principles of managing emergency medical service delivery systems.

**EMS 240. Patients With Special Challenges. 2.0 Credits.** Class-1.0. Clinical-0.0. Lab-2.0. Work-0.0

This course includes concepts of crisis intervention and techniques of interacting with patients with special challenges and is required for paramedic certification. Topics include appropriate intervention and interaction for neglected, abused, terminally ill, chronically ill, technology assisted, bariatric, physically challenged, mentally challenged, or assaulted patients as well as behavioral emergencies. Upon completion, students should be able to recognize and manage the care of patients with special challenges. Prerequisites: Take All: EMS 122 and EMS 130

**EMS 241. EMS Clinical Practicum IV. 4.0 Credits.** Class-0.0. Clinical-12.0. Lab-0.0. Work-0.0

This course provides clinical experiences in the hospital and/or field. Emphasis is placed on mastering the skills/competencies required of the paramedic providing advanced-level care. Upon completion, students should be able to provide advanced-level patient care as an entry-level paramedic. Prerequisites: Take All: EMS 130 and EMS 231

**EMS 250. Medical Emergencies. 4.0 Credits.** Class-3.0. Clinical-0.0. Lab-3.0. Work-0.0

This course provides an in-depth study of medical conditions frequently encountered in the prehospital setting and is required for paramedic certification. Topics include appropriate interventions/treatments for disorders/diseases/injuries affecting the following systems: respiratory, neurological, abdominal/gastrointestinal, endocrine, genitourinary, musculoskeletal, and immunological as well as toxicology, infectious diseases and diseases of the eyes, ears, nose and throat. Upon completion, students should be able to recognize, assess and manage the care of frequently encountered medical conditions based upon initial patient assessment. Prerequisites: Take All: EMS 122 and EMS 130

**EMS 260. Trauma Emergencies. 2.0 Credits.** Class-1.0. Clinical-0.0. Lab-3.0. Work-0.0

This course provides in-depth study of trauma including pharmacological interventions for conditions frequently encountered in the prehospital setting and is required for paramedic certification. Topics include an overview of thoracic, abdominal, genitourinary, orthopedic, neurological, and multi-system trauma, soft tissue trauma of the head, neck, and face as well as environmental emergencies. Upon completion, students should be able to recognize and manage trauma situations based upon patient assessment and should adhere to standards of care. Prerequisites: Take All: EMS 122 and EMS 130

**EMS 270. Life Span Emergencies. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0

This course covers medical/ethical/legal issues and the spectrum of age-specific emergencies from conception through death required for paramedic certification. Topics include gynecological, obstetrical, neonatal, pediatric, and geriatric emergencies and pharmacological therapeutics. Upon completion, students should be able to recognize and treat age-specific emergencies. Prerequisites: Take All: EMS 122 and EMS 130

**EMS 280. EMS Bridging Course. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0

This course is designed to bridge the knowledge gained in a continuing education paramedic program with the knowledge gained in an EMS curriculum program. Emphasis is placed on patient assessment, advanced electrocardiography utilizing the twelve-lead ECG, advanced pharmacology, the appropriate intervention and treatment of multi-system injuries/disorders, ethics, and NC laws and rules. Upon completion, students should be able to perform advanced patient assessment and practice skills.

**EMS 285. EMS Capstone. 2.0 Credits.** Class-1.0. Clinical-0.0. Lab-3.0. Work-0.0

This course provides an opportunity to demonstrate problem-solving skills as a team leader in simulated patient scenarios and is required for paramedic certification. Emphasis is placed on critical thinking, integration of didactic and psychomotor skills, and effective performance in simulated emergency situations. Upon completion, students should be able to recognize and appropriately respond to a variety of EMS-related events. Prerequisites: Take All: EMS 220, EMS 250, and EMS 260

## Engineering (EGR)

### **EGR 110. Introduction to Engineering Technology. 2.0 Credits.**

Class-1.0. Clinical-0.0. Lab-2.0. Work-0.0

This course introduces general topics relevant to engineering technology. Topics include career assessment, professional ethics, critical thinking and problem solving, usage of college resources for study and research, and using tools for engineering computations. Upon completion, students should be able to choose a career option in engineering technology and utilize college resources to meet their educational goals.

### **EGR 120. Engineering and Design Graphics. 3.0 Credits.**

Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0

This course introduces the graphical tools for engineering and design communications. Emphasis is placed upon selecting the appropriate methods and tools and conveying ideas using sketches, orthographic views and projections, and computer graphics applications. Upon completion, students should be able to communicate essential features or two-dimensional and three-dimensional objects using the proper tools and methods.

### **EGR 125. Appl Software for Tech. 2.0 Credits.**

Class-1.0. Clinical-0.0. Lab-2.0. Work-0.0

This course introduces personal computer software and teaches students how to customize the software for technical applications. Emphasis is placed on the use of common office applications software programs such as spreadsheets, word processing, graphics, and internet access. Upon completion, students should be able to demonstrate competency in using applications software to solve technical problems and communicate the results in text and graphical formats.

### **EGR 150. Intro to Engineering. 2.0 Credits.**

Class-1.0. Clinical-0.0. Lab-2.0. Work-0.0

This course is an overview of the engineering profession. Topics include goal setting and career assessment, ethics, public safety, the engineering method and design process, written and oral communication, interpersonal skills and team building, and computer applications. Upon completion, students should be able to understand the engineering process, the engineering profession, and utilize college resources to meet their educational goals.

Corequisites: Take ACA 122 Take MAT 171 MAT 172 or MAT 271

### **EGR 212. Logic System Design I. 3.0 Credits.**

Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course provides an introduction to digital circuits and analysis. Topics include Boolean Algebra; mixed logic; design of combinational circuits; introduction to sequential systems; and MSI building blocks. Upon completion, students should be able to analyze and design digital circuits and systems.

Prerequisites: Take EGR 150, MAT 271, and PHY 251

### **EGR 220. Engineering Statics. 3.0 Credits.**

Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course introduces the concepts of engineering based on forces in equilibrium. Topics include concentrated forces, distributed forces, forces due to friction, and inertia as they apply to machines, structures, and systems. Upon completion, students should be able to solve problems which require the ability to analyze systems of forces in static equilibrium.

Prerequisites: Take EGR 150, and PHY 251

Corequisites: Take MAT 272

### **EGR 228. Intro to Solid Mechanics. 3.0 Credits.**

Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course provides an introduction to engineering theory of deformable solids and applications. Topics include stress and deformation resulting from axial, torsion, and bending loads; shear and moment diagrams; Mohr's circle of stress; and strain and buckling of columns. Upon completion, students should be able to analyze solids subject to various forces and design systems using a variety of materials.

Prerequisites: Take EGR 220

### **EGR 250. Statics/Strength of Mater. 5.0 Credits.**

Class-4.0. Clinical-0.0. Lab-3.0. Work-0.0

This course includes vector analysis, equilibrium of force systems, friction, sectional properties, stress/strain, and deformation. Topics include resultants and components of forces, moments and couples, free-body diagrams, shear and moment diagrams, trusses, frames, beams, columns, connections, and combined stresses. Upon completion, students should be able to analyze simple structures.

Prerequisites: Take MAT 121 or MAT 171 Minimum grade C

## English (ENG)

### **ENG 101. Applied Communications I. 3.0 Credits.**

Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course is designed to enhance reading and writing skills for the workplace. Emphasis is placed on technical reading, job-related vocabulary, sentence writing, punctuation, and spelling. Upon completion, students should be able to identify main ideas with supporting details and produce mechanically correct short writings appropriate to the workplace. This is a diploma level course.

### **ENG 111. Writing and Inquiry. 3.0 Credits.**

Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course is designed to develop the ability to produce clear writing in a variety of genres and formats using a recursive process. Emphasis includes inquiry, analysis, effective use of rhetorical strategies, thesis development, audience awareness, and revision. Upon completion, students should be able to produce unified, coherent, well-developed essays using standard written English.

Prerequisites: Take DRE 098

### **ENG 112. Writing and Research in the Disciplines. 3.0 Credits.**

Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course, the second in a series of two, introduces research techniques, documentation styles, and writing strategies. Emphasis is placed on analyzing information and ideas and incorporating research findings into documented writing and research projects. Upon completion, students should be able to evaluate and synthesize information from primary and secondary sources using documentation appropriate to various disciplines. English Composition.

Prerequisites: Take ENG 111 with a minimum grade of C

### **ENG 113. Literature-Based Research. 3.0 Credits.**

Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course, the second in a series of two, expands the concepts developed in ENG 111 by focusing on writing that involves literature-based research and documentation. Emphasis is placed on critical reading and thinking and the analysis and interpretation of prose, poetry, and drama: plot, characterization, theme, cultural context, etc. Upon completion, students should be able to construct mechanically-sound, documented essays and research papers that analyze and respond to literary works. This course will include the analysis of two of the following three genres: short stories, poetry, and drama.

Prerequisites: Take DRE 098 or ENG 111 Minimum grade C



**ENG 114. Professional Research & Reporting. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course, the second in a series of two, is designed to teach professional communication skills. Emphasis is placed on research, listening, critical reading and thinking, analysis, interpretation, and design used in oral and written presentations. Upon completion, students should be able to work individually and collaboratively to produce well-designed business and professional written and oral presentations.

Prerequisites: Take DRE 098 or ENG 111 Minimum grade C

**ENG 125. Creative Writing I. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course is designed to provide students with the opportunity to practice the art of creative writing. Emphasis is placed on writing, fiction, poetry, and sketches. Upon completion, students should be able to craft and critique their own writing and critique the writing of others. The primary focus of this course is poetry and fiction although some time will be devoted to non-fiction; Writing Intensive Elective for UNCC.

Prerequisites: Take ENG 111 Minimum grade C

**ENG 126. Creative Writing II. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course is designed as a workshop approach for advancing imaginative and literary skills. Emphasis is placed on the discussion of style, techniques, and challenges for first publications. Upon completion, students should be able to submit a piece of their writing for publication. The main focus of this course is on poetry and fiction; some attention will be devoted to creative non-fiction; This course is a Writing Intensive Elective for UNCC.

Prerequisites: Take ENG 125

**ENG 231. American Literature I. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course covers selected works in American literature from its beginnings to 1865. Emphasis is placed on historical background, cultural context, and literary analysis of selected prose, poetry, and drama. Upon completion, students should be able to analyze and interpret literary works in their historical and cultural contexts. ENG 231 is an introduction to traditional and nontraditional writers, significant literary trends and movements, literary terminology, and a variety of critical approaches; Students seeking to take this course to meet the college transfer humanities requirement may also take ENG 232 (no ENG prerequisites). Prerequisites: Take ENG 112 ENG 113 or ENG 114 Minimum grade C

**ENG 232. American Literature II. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course covers selected works in American literature from 1865 to the present. Emphasis is placed on historical background, cultural context, and literary analysis of selected prose, poetry, and drama. Upon completion, students should be able to analyze and interpret literary works in their historical and cultural contexts. ENG 232 is an introduction traditional and nontraditional writers, significant literary trends and movements, literary terminology, and a variety of critical approaches; Students seeking to take this course to meet the college transfer humanities requirement may also take ENG 231(no ENG 231 prerequisite).

Prerequisites: Take ENG 112 ENG 113 or ENG 114 Minimum grade C

**ENG 241. British Literature I. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course covers selected works in British literature from its beginnings to the Romantic Period. Emphasis is placed on historical background, cultural context, and literary analysis of selected prose, poetry, and drama. Upon completion, students should be able to interpret, analyze, and respond to literary works in their historical and cultural contexts.

Prerequisites: Take ENG 112 ENG 113 or ENG 114 Minimum grade C

**ENG 242. British Literature II. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course covers selected works in British literature from the Romantic Period to the present. Emphasis is placed on historical background, cultural context, and literary analysis of selected prose, poetry, and drama. Upon completion, students should be able to interpret, analyze, and respond to literary works in their historical and cultural contexts.

Prerequisites: Take ENG 112 ENG 113 or ENG 114 Minimum grade C

**ENG 251. Western World Literature I. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course provides a survey of selected European works from the Classical period through the Renaissance. Emphasis is placed on historical background, cultural context, and literary analysis of selected prose, poetry, and drama. Upon completion, students should be able to interpret, analyze, and respond to selected works.

Prerequisites: Take One: ENG 112, ENG 113, or ENG 114

**ENG 252. Western World Literature II. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course provides a survey of selected European works from the Neoclassical period to the present. Emphasis is placed on historical background, cultural context, and literary analysis of selected prose, poetry, and drama. Upon completion, students should be able to interpret, analyze, and respond to selected works.

Prerequisites: Take ENG 112 ENG 113 or ENG 114 Minimum grade C

**ENG 253. The Bible As Literature. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course introduces the Hebrew Old Testament and the Christian New Testament as works of literary art. Emphasis is placed on the Bible's literary aspects including history, composition, structure, and cultural contexts. Upon completion, students should be able to identify and analyze selected books and passages using appropriate literary conventions.

Prerequisites: Take ENG 112 ENG 113 or ENG 114 Minimum grade C

**ENG 272. Southern Literature. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course provides an analytical study of the works of several Southern authors. Emphasis is placed on the historical and cultural contexts, themes, aesthetic features of individual works, and biographical backgrounds of the authors. Upon completion, students should be able to interpret, analyze, and discuss selected works.

Prerequisites: Take ENG 112 ENG 113 or ENG 114 Minimum grade C

**ENG 273. African-American Literature. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course provides a survey of the development of African-American literature from its beginnings to the present. Emphasis is placed on historical and cultural context, themes, literary traditions, and backgrounds of the authors. Upon completion, students should be able to interpret, analyze, and respond to selected texts.

Prerequisites: Take ENG 112 ENG 113 or ENG 114 Minimum grade C

**ENG 274. Literature by Women. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course provides an analytical study of the works of several women authors. Emphasis is placed on the historical and cultural contexts, themes and aesthetic features of individual works, and biographical backgrounds of the authors. Upon completion, students should be able to interpret, analyze, and discuss selected works.

Prerequisites: Take ENG 112 ENG 113 or ENG 114 Minimum grade C

**ENG 275. Science Fiction. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course covers the relationships between science and literature through analysis of short stories and novels. Emphasis is placed on scientific discoveries that shaped Western culture and our changing view of the universe as reflected in science fiction literature. Upon completion, students should be able to trace major themes and ideas and illustrate relationships between science, world view, and science fiction literature.

Prerequisites: Take ENG 112 ENG 113 or ENG 114 Minimum grade C

## English As a Foreign Language (EFL)

**EFL 111. English for Internationals I. 4.0 Credits.** Class-4.0. Clinical-0.0. Lab-0.0. Work-0.0

This course is designed to prepare advanced non-native speakers of English for successful college-level writing. Emphasis is placed on developing and supporting academic and cultural themes, editing for grammatical correctness and clarity, and determining approaches for different audiences and purposes. Upon completion, students should be able to produce college-level essays in a variety of rhetorical formats.

Prerequisites: Take EFL 084 EFL 094 Minimum grade C

Corequisites: Take EFL 181

**EFL 112. English for Internationals II. 4.0 Credits.** Class-4.0. Clinical-0.0. Lab-0.0. Work-0.0

This course is designed to refine academic reading, listening, and speaking skills for advanced non-native speakers of English. Emphasis is placed on understanding and analyzing university-level texts on different cultural and academic topics and developing effective note-taking and presentation skills in various disciplines. Upon completion, students should be able to integrate information from academic lectures and readings and make academic presentations.

Prerequisites: Take EFL 064 EFL 074 Minimum grade C

Corequisites: Take EFL 182

**EFL 181. EFL Lab 1. 1.0 Credit.** Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0

This course is designed to enhance the preparation of advanced non-native speakers of English for successful communication as required in college-level courses. Emphasis is placed on the writing and editing of compositions for grammatical accuracy and clarity through the use of supplementary learning media and materials. Upon completion, students should be able to converse and write in various organizational formats.

Corequisites: Take EFL 111

**EFL 182. EFL Lab 2. 1.0 Credit.** Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0

This course is designed to enhance reading and comprehension skills for advanced non-native speakers of English. Emphasis is placed on understanding academic texts and developing effective note taking skills through the use of supplementary learning media and materials. Upon completion, students should be able to differentiate between main points, supporting and extraneous information, and take organized notes on lectures and texts.

Corequisites: Take EFL 112

## Entertainment Technologies (ENT)

**ENT 211. Entertainment Promotion. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course examines the elements of marketing and promotion specifically applicable to the entertainment business. Topics include the creation of publicity materials, understanding the process of developing media relations, developing a press kit, and creating a publicity campaign. Upon completion, students should be able to create a marketing and promotion campaign.

## Environmental Science (ENV)

**ENV 110A. Environmental Science Laboratory. 1.0 Credit.** Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0

This course provides a laboratory component to complement ENV 110. Emphasis is placed on laboratory and field experience. Upon completion, students should be able to demonstrate a practical understanding of environmental relationships and of contemporary environmental issues.

Corequisites: Take ENV 110

**ENV 110. Environmental Science. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course covers fundamental scientific principles and problems facing society today. Topics include population, natural resources, air and water pollution, and waste disposal problems. Upon completion, students should be able to demonstrate insight into the role the individual plays in shaping the environment.

**ENV 120. Earth Science. 4.0 Credits.** Class-3.0. Clinical-0.0. Lab-2.0. Work-0.0

This course covers the fundamental principles of earth science that provide a foundation for continued study in environmental science. Emphasis is placed on the basic principles of geology, oceanography, meteorology, astronomy, and the development of inquiry about the natural world through observation. Upon completion, students should be able to demonstrate an understanding of the component areas of earth science.

Prerequisites: Complete one of the following options:

- ENV 110
- BIO 140 and BIO 140A

**ENV 218. Environmental Health. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course covers the influence of environmental conditions on human health. Emphasis is placed on environmental contaminants and the major exposure routes of the human body. Upon completion, students should be able to examine segments of the environment, including air, water, and food, and determine how the conditions of these influence human health.

**ENV 220. Applied Ecology. 4.0 Credits.** Class-3.0. Clinical-0.0. Lab-2.0. Work-0.0

This course covers the relationships between organisms and their environment and the interactions among organisms. Topics include environmental factors affecting aquatic and terrestrial systems, regulation and dynamics of populations, interactions among species, and the ecological viewpoint in modern land management. Upon completion, students should be able to demonstrate an understanding of the relationship between man and his environment and the ecological impact of human activities.

Prerequisites: Take One Group:

- BIO 110 and ENV 110
- BIO 111 and ENV 110
- BIO 111, BIO 140, and BIO 140A

**ENV 224. Land Resource Management. 4.0 Credits.** Class-3.0.

Clinical-0.0. Lab-2.0. Work-0.0

This course covers methods of properly managing land-based resources for maximum conservation and use. Emphasis is placed on the physical, biological, and ecological principles underlying sustainable use of soil, mineral, forest, and ground and surface water resources for current and future generations. Upon completions, students should be able to develop conservation plans for sustainable use of major land resources.

Prerequisites: Complete one of the following options: Take ENV 110 with a minimum grade of C

Take BIO 140 BIO 140A with a minimum grade of C

Take ENV 120 with a minimum grade of C

Take GEL 120 with a minimum grade of C

Take PHS 130 with a minimum grade of C

**ENV 226. Environmental Law. 3.0 Credits.** Class-3.0. Clinical-0.0.

Lab-0.0. Work-0.0

This course covers federal laws and acts concerning environmental quality standards and the use of resources, legal procedures for enforcing laws, and problems concerning enforcement. Emphasis is placed on environmental law basics, water quality laws, air quality laws, waste disposal laws, and biological resource protection laws. Upon completion, students should be able to demonstrate an understanding of federal/state environmental laws and their importance to the protection of environmental quality.

**ENV 232. Site Assessment and Remediation. 3.0 Credits.** Class-2.0.

Clinical-0.0. Lab-3.0. Work-0.0

This course introduces the concepts and techniques utilized in the assessment and remediation of contaminated soils and groundwater. Emphasis is placed on hydrogeology, environmental sampling, and remediation practices. Upon completion, the student should be able to properly sample environmental media, demonstrate a knowledge of groundwater dynamics, and discuss various remediation approaches.

Prerequisites: Complete one of the following options:

- ENV 110
- BIO 140 and BIO 140A

## Fire Protection (FIP)

**FIP 120. Introduction to Fire Protection. 3.0 Credits.** Class-3.0.

Clinical-0.0. Lab-0.0. Work-0.0

This course provides an overview of the development, methods, systems and regulations that apply to the fire protection field. Topics include history, evolution, statistics, suppression, organizations, careers, curriculum, and related subjects. Upon completion, students should be able to demonstrate a broad understanding of the fire protection field.

**FIP 124. Fire Prevention & Public Education. 3.0 Credits.** Class-3.0.

Clinical-0.0. Lab-0.0. Work-0.0

This course introduces fire prevention concepts as they relate to community and industrial operations referenced in NFPA standard 101. Topics include the development and maintenance of fire prevention programs, educational programs, and inspection programs. Upon completion, students should be able to research, develop, and present a fire safety program to a citizens or industrial group.

**FIP 128. Detection and Investigation. 3.0 Credits.** Class-3.0.

Clinical-0.0. Lab-0.0. Work-0.0

This course covers procedures for determining the origin and cause of accidental and incendiary fires referenced in NFPA standard 921. Topics include collection and preservation of evidence, detection and determination of accelerants, courtroom procedure and testimony, and documentation of the fire scene. Upon completion, students should be able to conduct a competent fire investigation and present those findings to appropriate officials or equivalent.

**FIP 132. Building Construction. 3.0 Credits.** Class-3.0. Clinical-0.0.

Lab-0.0. Work-0.0

This course covers the principles and practices reference in NFPA standard 220 related to various types of building construction, including residential and commercial, as impacted by fire conditions. Topics include types of construction and related elements, fire resistive aspects of construction materials, building codes, collapse, and other related topics. Upon completion, students should be able to understand and recognize various types of construction and their positive or negative aspects as related to fire conditions.

**FIP 136. Inspections and Codes. 3.0 Credits.** Class-3.0. Clinical-0.0.

Lab-0.0. Work-0.0

This course covers the fundamentals of fire and building codes and procedures to conduct an inspection referenced in NFPA standard 1730. Topics include review of fire and building codes, writing inspection reports, identifying hazards, plan reviews, site sketches, and other related topics. Upon completion, students should be able to conduct a fire code compliance inspection and produce a written report.

**FIP 140. Industrial Fire Protection. 3.0 Credits.** Class-3.0. Clinical-0.0.

Lab-0.0. Work-0.0

This course covers fire protection systems in industrial facilities referenced in NFPA standard 1. Topics include applicable health and safety standards, insurance carrier regulations, other regulatory agencies, hazards of local industries, fire brigade operation, and loss prevention programs. Upon completion, students should be able to plan and evaluation an industrial facility's fire protection program.

**FIP 146. Fire Protection Systems. 4.0 Credits.** Class-3.0. Clinical-0.0. Lab-2.0. Work-0.0

This course introduces various types of automatic sprinklers, standpipes, fire alarm systems, and fixed and portable extinguishing systems referenced in NFPA standard 25, including their operation, installation, and maintenance. Topics include wet and dry systems, testing and maintenance, water supply requirements, fire detection and alarm systems, including application, testing, and maintenance of Halon, carbon dioxide, dry chemical, and special extinguishing agents utilized in fixed and portable systems. Upon completion, students should be able to demonstrate a working knowledge of sprinkler and alarm systems, both fixed and portable, including appropriate application, operation, inspection, and maintenance requirements.

**FIP 152. Fire Protection Law. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course covers fire protection law as referenced in NFPA standard 1. Topics include legal terms, contracts, liability, review of case histories, and other related topics. Upon completion, students should be able to discuss laws, codes, and ordinances as they relate to fire protection.

**FIP 220. Fire Fighting Strategies. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course provides preparation for command of initial incident operations involving emergencies within both the public and private sector referenced in NFPA standards 1561, 1710, and 1720. Topics include incident management, fire-ground tactics and strategies, incident safety, and command/control of emergency operations. Upon completion, students should be able to describe the initial incident system as it relates to operations involving various emergencies in fire and non-fire situations.

**FIP 221. Advanced Fire Fighting Strategies. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course covers command-level operations for multi-company/agency operations involving fire and non-fire emergencies. Topics include advanced use of the Incident Command System (ICS), advanced incident analysis, command-level fire operations, and control of both man made and natural major disasters. Upon completion, students should be able to describe proper and accepted systems for the mitigation of emergencies at the level of overall scene command.

Prerequisites: Take FIP 220

**FIP 224. Fire Instructor I & II. 4.0 Credits.** Class-4.0. Clinical-0.0. Lab-0.0. Work-0.0

This course covers the knowledge, skills, and abilities needed to train others in fire service operations. Topics include planning, presenting, and evaluating lesson plans, learning styles, use of media, communication, and other related topics. Upon completion, students should be able to meet the requirements of the Fire Instructor I and II objectives from National Fire Protection Association (NFPA) 1041.

**FIP 226. Fire Officer I & II. 4.0 Credits.** Class-4.0. Clinical-0.0. Lab-0.0. Work-0.0

This course covers the knowledge, skills, and requirements referenced in the National Fire Protection Association (NFPA) Standard 1021 for Fire Officer I and II training. Topics include officer roles and responsibilities, budgets, fire cause determination, inspections, education, leadership, management, public relations, and other requirements included in the NFPA standard. Upon completion, students should be able to demonstrate an understanding of relevant NFPA standards as required for state Fire Officer I and II certification.

**FIP 228. Local Government Finance. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course introduces local governmental financial principles and practices. Topics include budget preparation and justification, revenue policies, statutory requirements, audits, and the economic climate. Upon completion, students should be able to comprehend the importance of finance as it applies to the operations of a department.

**FIP 229. Fire Dynamics and Combustion. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course covers the theories and fundamentals of how and why fires start and spread, and how they are safely controlled referenced in NFPA standard 1001. Topics include components of fire, fire sources, fire behavior, properties of combustible solids, classification of hazards, and the use of fire extinguishing agents. Upon completion, students should be able to describe the properties of matter and dynamics of fire, identify fuel sources, and compare suppressants and extinguishment techniques.

**FIP 230. Chemistry of Hazardous Materials I. 5.0 Credits.** Class-5.0. Clinical-0.0. Lab-0.0. Work-0.0

This course covers the evaluation of hazardous materials referenced in NFPA standard 1072. Topics include use of the periodic table, hydrocarbon derivatives, placards and labels, parameters of combustion, and spill and leak mitigation. Upon completion, students should be able to demonstrate knowledge of the chemical behavior of hazardous materials.

**FIP 231. Chemistry of Hazardous Materials II. 5.0 Credits.** Class-4.0. Clinical-0.0. Lab-2.0. Work-0.0

This course covers hazardous materials characterization, properties, location, handling and response guidelines, hazard survey principles, and other related topics referenced in NFPA standard 1072. Topics include radiation hazards, instruments, inspections, and detection of the presence of hazardous materials in industrial/commercial occupancies. Upon completion, students should be able to inspect chemical/radioactive sites and use on-site visits to gasoline and/or LPG storage facilities/chemical plants to develop a pre-plan.

Prerequisites: Take FIP 230

**FIP 240. Fire Service Supervision. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course covers supervisory skills and practices in the fire protection field. Topics include the supervisor's job, supervision skills, the changing work environment, managing change, organizing for results, discipline and grievances, and safety. Upon completion, students should be able to demonstrate an understanding of the roles and responsibilities of effective fire service supervision, meeting elements of NFPA 1021.

**FIP 248. Fire Service Personnel Administration. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course covers the basics of setting up and administering the personnel functions of fire protection organizations referenced in NFPA standard 1021. Emphasis is placed on human resource planning, classification and job analysis, equal opportunity employment, affirmative action, recruitment, retention, development, performance evaluation, and assessment centers. Upon completion, students should be able to demonstrate knowledge of the personnel function as it relates to managing fire protection.



**FIP 256. Municipal Public Relations. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course is a general survey of municipal public relations and their effect on the governmental process referenced in NFPA standard 1035. Topics include principles of public relations, press releases, press conferences, public information officers, image surveys, and the effects of perceived service on fire protection delivery. Upon completion, students should be able to manage public relations functions of organizations which meet elements of NFPA 1021 for Fire Officer I and II.

**FIP 276. Managing Fire Services. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course provides an overview of fire department operative services referenced in NFPA standard 1021. Topics include finance, staffing, equipment, code enforcement, management information, specialized services, legal issues, planning, and other related topics. Upon completion, students should be able to understand concepts and apply fire department management and operations principles.

**FIP 277. Fire and Social Behavior. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course covers fire-related aspects of human behavior, with an emphasis on research and a systems approach to human-behavior analysis. Topics include identification of populations and structures at high risk, evaluation of systems models, and use of computer models to predict human behavior during fires. Upon completion, students should be able to identify and anticipate human behavior in response to various residential, commercial, board-and-care facility, and wildland/rural fire events.

## French (FRE)

**FRE 111. Elementary French I. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course introduces the fundamental elements of the French language within a cultural context. Emphasis is placed on the development of basic listening, speaking, reading, and writing skills. Upon completion, students should be able to comprehend and respond with grammatical accuracy to spoken and written French and demonstrate cultural awareness.

Prerequisites: Complete one of the following options: Take DRE 098

Take EFL 111 EFL 112 with a minimum grade of C

Take ENG 111 with a minimum grade of C

Corequisites: Take FRE 181

**FRE 112. Elementary French II. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course is a continuation of FRE 111 focusing on the fundamental elements of the French language within a cultural context. Emphasis is placed on the progressive development of listening, speaking, reading, and writing skills. Upon completion, students should be able to comprehend and respond with increasing proficiency to spoken and written French and demonstrate further cultural awareness.

Prerequisites: Take FRE 111 FRE 181 Minimum grade C

Corequisites: Take FRE 182

**FRE 161. Cultural Immersion. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0

This course explores Francophone culture through intensive study on campus and field experience in a host country or area. Topics include an overview of linguistic, historical, geographical, sociopolitical, economic, and/or artistic concerns of the area visited. Upon completion, students should be able to exhibit first-hand knowledge of issues pertinent to the host area and demonstrate an understanding of cultural differences.

Prerequisites: Take FRE 111 Minimum grade C

**FRE 181. French Lab 1. 1.0 Credit.** Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0

This course provides an opportunity to enhance acquisition of the fundamental elements of the French language. Emphasis is placed on the progressive development of basic listening, speaking, reading, and writing skills through the use of supplementary learning media and materials. Upon completion, students should be able to comprehend and respond with grammatical accuracy to spoken and written French and demonstrate cultural awareness.

Corequisites: Take FRE 111

**FRE 182. French Lab 2. 1.0 Credit.** Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0

This course provides an opportunity to enhance acquisition of the fundamental elements of the French language. Emphasis is placed on the progressive development of basic listening, speaking, reading, and writing skills through the use of supplementary learning media and materials. Upon completion, students should be able to comprehend and respond with increasing proficiency to spoken and written French and demonstrate cultural awareness.

Prerequisites: Take FRE 111 FRE 181 Minimum grade C

Corequisites: Take FRE 112

**FRE 211. Intermediate French I. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course provides a review and expansion of the essential skills of the French language. Emphasis is placed on the study of authentic and representative literary and cultural texts. Upon completion, students should be able to communicate effectively, accurately, and creatively about the past, present, and future.

Prerequisites: Take FRE 112 FRE 182 Minimum grade C

Corequisites: Take FRE 281

**FRE 212. Intermediate French II. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course is a continuation of FRE 211. Emphasis is placed on the continuing study of authentic and representative literary and cultural texts. Upon completion, students should be able to communicate spontaneously and accurately with increasing complexity and sophistication.

Prerequisites: Take FRE 211 FRE 281 Minimum grade C

Corequisites: Take FRE 282

**FRE 281. French Lab 3. 1.0 Credit.** Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0

This course provides an opportunity to enhance the review and expansion of the essential skills of the French language. Emphasis is placed on the study of authentic and representative literary and cultural texts through the use of supplementary learning media and materials. Upon completion, students should be able to communicate effectively, accurately, and creatively about the past, present, and future.

Prerequisites: Take FRE 112 FRE 182 with a minimum grade of C

Corequisites: Take FRE 211

**FRE 282. French Lab 4. 1.0 Credit.** Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0

This course provides an opportunity to enhance the review and expansion of the essential skills of the French language. Emphasis is placed on the continuing study of authentic and representative literary and cultural texts through the use of supplementary learning media and materials. Upon completion, students should be able to communicate spontaneously and accurately with increasing complexity and sophistication.

Prerequisites: Take FRE 211 and FRE 281 with a minimum grade of C

# Geographic Information Systems (GIS)

**GIS 111. Introduction to GIS. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0

This course introduces the hardware and software components of a Geographic Information System and reviews GIS applications. Topics include data structures and basic functions, methods of data capture and sources of data, and the nature and characteristics of spatial data and objects. Upon completion, students should be able to identify GIS hardware components, typical operations, products/applications, and differences between database models and between raster and vector systems.

**GIS 112. Introduction to GPS. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0

This course provides an overview of Global Positioning Systems (GPS). Topics include the theory, implementation, and operations of GPS, as well as alternate data source remote sensing. Upon completion, students should be able to demonstrate an understanding of the fundamentals of GPS.

**GIS 120. Introduction to Geodesy. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0

This course introduces the fundamental concepts behind map projections, datums, and coordinate systems. Topics include the theory of how the earth's shape is defined and how geographic features are positioned using spherical coordinate systems. Upon completion, students should be able to demonstrate an understanding of the fundamentals of geodesy as it relates to the measurement and representation of the earth.

**GIS 121. Georeferencing & Mapping. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0

This course introduces coordinate systems, fundamentals of surveying, and cartography. Topics include the theory, acquisition, and use of locational data using both continuous and discrete georeferencing methods. Upon completion, students should be able to identify appropriate coordinate systems for a situation and translate data into correct map form.

**GIS 125. CAD for GIS. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0

This course introduces the concepts of Computer Aided Drafting (CAD) as well as software that is used for building geographic data for a GIS. Emphasis is placed on the learning of basic commands used in building spatial data. Upon completion, the student will be able to operate within a CAD environment.

Corequisites: Take GIS 111

**GIS 215. GIS Data Models. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0

This course covers interpreting and understanding of a variety data formats available in GIS. Topics include the similarities and differences between data models as well as how data is treated differently within each format, to include the conversion of data between different environments. Upon completion, students should be able to demonstrate an understanding of the fundamentals of GIS data storage and interoperability.

Prerequisites: Take GIS 111

**GIS 221. Advanced Topics in GIS. 2.0 Credits.** Class-1.0. Clinical-0.0. Lab-2.0. Work-0.0

This course covers technical aspects of GIS functions, algorithms, theory of geographical data structures, and error handling. Emphasis is placed on laboratory experiences requiring manipulation of tools, data, and macros. Upon completion, students should be able to construct a small Geographic Information System.

Prerequisites: Take GIS 111

**GIS 222. Internet Mapping. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0

This course is designed as an introduction to multimedia, interactive, animated, and Web cartography. Topics include the principles of effective cartographic communication, and stressing the new and important roles digital cartography is coming to play in cyberspace. Upon completion, students should be able to demonstrate the ability to evaluate digital cartographic information and create effective internet maps.

Prerequisites: Take GIS 111

**GIS 225. Advanced Methods in GIS. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0

This course promotes the analytic and critical thinking that is required when conducting statistical analysis of geographic data. Emphasis is placed on understanding data at a descriptive level for the conducting of statistical analysis. Upon completion, students will be able to understand the unique characteristics of geo-referenced data.

Prerequisites: Take GIS 111

**GIS 230. GIS Data Creation. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0

This course introduces the fundamental concepts of primary GIS data creation. Topics include the collection of field data, digital conversion of existing hardcopy maps, and the construction of spatial data from known geodetic locations. Upon completion, students should be able to demonstrate an ability to collect, create, and process spatial data within a variety of environments.

Prerequisites: Take GIS 111

**GIS 232. Spatial Databases. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0

This course covers various stages of spatial database design and implementation, including conceptual models and query languages. Topics include spatial networks, spatial data mining, indexing, and query processing. Upon completion, students should be able to demonstrate a comprehensive knowledge of spatial databases management systems.

Prerequisites: Take GIS 111 GIS 121

**GIS 235. Raster GIS. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0

This course will provide students with the fundamentals of analyzing remotely sensed data. Emphasis is placed on digital image enhancement as a means to further data analysis. Upon completion, students will be able to accurately interpret and analyze remotely sensed data for use in a raster or vector GIS.

Prerequisites: Take All: GIS 111 and GIS 121

**GIS 240. Air Photo Interpretation. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0

This course is designed to introduce the student to remote sensing, photogrammetry and various components of land use mapping. Emphasis is placed on the art and science of aerial photo interpretation. Upon completion, students will be able to review, gather and analyze data from diverse forms of image maps.

**GIS 245. Introduction to Spatial Analysis. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0

This course is designed to expose students to various components of spatial analysis. Emphasis is placed on modeling and decision making with the use of spatial data. Upon completion, students will be able to utilize statistical models in the process of spatial analysis.

Prerequisites: Take All: GIS 111 and GIS 121

Corequisites: Take GIS 225

**GIS 246. Principles of Property Mapping. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0

This course covers interpreting and understanding land records, updating parcel data, and utilizing the data for information retrieval and spatial analysis. Topics include the use and development of parcel information, parcel boundaries, and legal land descriptions. Upon completion, students should be able to demonstrate an understanding of the fundamentals of parcel mapping.

Prerequisites: Take GIS 111 GIS 121

**GIS 249. Remote Sensing. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-0.0. Work-0.0

This course introduces remote sensing and presents an overview of the use of satellite imagery within the field of geospatial technology. Topics will include the principles of remote sensing, satellite platforms, and sensors. Upon completion, students should be able to demonstrate an understanding of data sources, uses, and analysis techniques of remote sensing.

Prerequisites: Complete one of the following options: Take GIS 111 and GIS 240

Take GIS 111 and GIS 235

**GIS 261. Programming in GIS. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0

The course provides an understanding of how to customize GIS software applications by way of modified toolbars, menus, and buttons. Topics include the theory and implementation of the various scripting languages currently in use. Upon completion, students should be able to modify the appearance of interface elements, save interface customizations, and add custom functionality to a GIS application.

Prerequisites: Take GIS 111 GIS 161

## Geography (GEO)

**GEO 110. Introduction to Geography. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course introduces map reading skills and the physical and cultural features of different areas of the earth. Topics include spatial association, the importance of location, physical characteristics of the earth, and the impact of humans on the environment. Upon completion, students should be able to demonstrate an ability to read a map and describe physical and cultural features of different regions.

**GEO 111. World Regional Geography. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course introduces the regional concept which emphasizes the spatial association of people and their environment. Emphasis is placed on the physical, cultural, and economic systems that interact to produce the distinct regions of the earth. Upon completion, students should be able to describe variations in physical and cultural features of a region and demonstrate an understanding of their functional relationships. GEO 111 is intended as a Behavioral and Social Sciences course.

**GEO 131. Physical Geography I. 4.0 Credits.** Class-3.0. Clinical-0.0. Lab-2.0. Work-0.0

This course introduces the basic physical components that help shape the earth. Emphasis is placed on the geographic grid, cartography, weather, climate, biogeography, and soils. Upon completion, students should be able to identify these components and explain how they interact.

## Geology (GEL)

**GEL 111. Geology. 4.0 Credits.** Class-3.0. Clinical-0.0. Lab-2.0. Work-0.0

This course introduces basic landforms and geological processes. Topics include rocks, minerals, volcanoes, fluvial processes, geological history, plate tectonics, glaciers, and coastal dynamics. Upon completion, students should be able to describe basic geological processes that shape the earth. This course introduces basic landforms and geological processes. Topics include rocks, minerals, volcanoes, fluvial processes, geological history, plate tectonics, glaciers, and coastal dynamics. Upon completion, students should be able to describe basic geological processes that shape the earth. This course has been approved to satisfy the comprehensive articulation agreement general education core requirement in natural sciences/Mathematics.

**GEL 113. Historical Geology. 4.0 Credits.** Class-3.0. Clinical-0.0. Lab-2.0. Work-0.0

This course covers the geological history of the earth and its life forms. Emphasis is placed on the study of rock strata, fossil groups, and geological time. Upon completion, students should be able to identify major fossil groups and associated rock strata and approximate ages of geological formations.

Prerequisites: Take One: GEL 111 or GEL 120

**GEL 120. Physical Geology. 4.0 Credits.** Class-3.0. Clinical-0.0. Lab-2.0. Work-0.0

This course provides a study of the structure and composition of the earth's crust. Emphasis is placed on weathering, erosional and depositional processes, mountain building forces, rocks and minerals, and structural changes. Upon completion, students should be able to explain the structure, composition, and formation of the earth's crust.

**GEL 230. Environmental Geology. 4.0 Credits.** Class-3.0. Clinical-0.0. Lab-2.0. Work-0.0

This course provides insights into geologic forces that cause environmental changes influencing man's activities. Emphasis is placed on natural hazards and disasters caused by geologic forces. Upon completion, students should be able to relate major hazards and disasters to the geologic forces responsible for their occurrence.

Prerequisites: Take GEL 111, GEL 120, or PHS 130 Minimum grade C

## German (GER)

**GER 111. Elementary German I. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course introduces the fundamental elements of the German language within a cultural context. Emphasis is placed on the development of basic listening, speaking, reading, and writing skills. Upon completion, students should be able to comprehend and respond with grammatical accuracy to spoken and written German and demonstrate cultural awareness.

Prerequisites: Complete one of the following options: Take DRE 098

Take EFL 111 and EFL 112 with a minimum grade of C

Take ENG 111 with a minimum grade of C

Corequisites: Take GER 181

**GER 112. Elementary German II. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course is a continuation of GER 111 focusing on the fundamental elements of the German language within a cultural context. Emphasis is placed on the progressive development of listening, speaking, reading, and writing skills. Upon completion, students should be able to comprehend and respond with increasing proficiency to spoken and written German and demonstrate further cultural awareness.

Prerequisites: Take GER 111 and GER 181 Minimum grade C

Corequisites: Take GER 182

**GER 161. Cultural Immersion. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0

This course explores German culture through intensive study on campus and field experience in a host country or area. Topics include an overview of linguistic, historical, geographical, sociopolitical, economic and/or artistic concerns of the area visited. Upon completion, students should be able to exhibit first-hand knowledge of issues pertinent to the host area and demonstrate an understanding of cultural differences.

Prerequisites: Take GER 111 Minimum grade C

**GER 181. German Lab 1. 1.0 Credit.** Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0

This course provides an opportunity to enhance acquisition of the fundamental elements of the German language. Emphasis is placed on the progressive development of basic listening, speaking, reading, and writing skills through the use of supplementary learning media and materials. Upon completion, students should be able to comprehend and respond with grammatical accuracy to spoken and written German and demonstrate cultural awareness.

**GER 182. German Lab 2. 1.0 Credit.** Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0

This course provides an opportunity to enhance acquisition of the fundamental elements of the German language. Emphasis is placed on the progressive development of basic listening, speaking, reading, and writing skills through the use of supplementary learning media and materials. Upon completion, students should be able to comprehend and respond with increasing proficiency to spoken and written German and demonstrate cultural awareness.

Prerequisites: Take GER 111 and GER 181 Minimum grade C

**GER 211. Intermediate German I. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course provides a review and expansion of the essential skills of the German language. Emphasis is placed on the study of authentic and representative literary and cultural texts. Upon completion, students should be able to communicate effectively, accurately, and creatively about the past, present, and future.

Prerequisites: Take GER 112 and GER 182 Minimum grade C

Corequisites: Take GER 281

**GER 212. Intermediate German II. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course provides a continuation of GER 211. Emphasis is placed on the continuing study of authentic and representative literary and cultural texts. Upon completion, students should be able to communicate spontaneously and accurately with increasing complexity and sophistication.

Prerequisites: Take GER 211 and GER 281 Minimum grade C

Corequisites: Take GER 282

**GER 281. German Lab 3. 1.0 Credit.** Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0

This course provides an opportunity to enhance the review and expansion of the essential skills of the German language. Emphasis is placed on the study of authentic and representative literary and cultural texts through the use of supplementary learning media and materials. Upon completion, students should be able to communicate effectively, accurately, and creatively about the past, present, and future.

Prerequisites: Take GER 112 and GER 182 Minimum grade C

**GER 282. German Lab 4. 1.0 Credit.** Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0

This course provides an opportunity to enhance the review and expansion of the essential skills of the German language. Emphasis is placed on the continuing study of authentic and representative literary and cultural texts through the use of supplementary learning media and materials. Upon completion, students should be able to communicate spontaneously and accurately with increasing complexity and sophistication.

Prerequisites: Take GER 211 and GER 281 Minimum grade C

## Gerontology (GRO)

**GRO 120. Gerontology. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course covers the psychological, social, and physical aspects of aging. Emphasis is placed on the factors that promote mental and physical well-being. Upon completion, students should be able to recognize the aging process and its psychological, social, and physical aspects.

## Graphic Arts (GRA)

**GRA 110. Graphic Arts Orientation. 2.0 Credits.** Class-2.0. Clinical-0.0. Lab-0.0. Work-0.0

This course covers the history, development, and commercial applications of the major printing processes. Topics include offset lithography, screen printing, intaglio, relief printing, and emerging technologies. Upon completion, students should be able to demonstrate an understanding of the major characteristics, advantages, and disadvantages of each process.

**GRA 121. Graphic Arts I. 4.0 Credits.** Class-2.0. Clinical-0.0. Lab-4.0. Work-0.0

This course introduces terminology, tools and materials, procedures, and equipment used in graphic arts production. Topics include copy preparation and pre-press production relative to printing. Upon completion, students should be able to demonstrate an understanding of graphic arts production.

**GRA 140. Graphic Arts Imaging. 2.0 Credits.** Class-1.0. Clinical-0.0. Lab-2.0. Work-0.0

This course covers the use of photographic and electronic imaging techniques in the printing industry. Topics include exposure control and manipulation for a variety of process photography procedures and emerging electronic imaging techniques. Upon completion, students should be able to create line, special effect, and halftone images by both conventional and computer imaging methods.



**GRA 151. Computer Graphics I. 2.0 Credits.** Class-1.0. Clinical-0.0. Lab-3.0. Work-0.0

This course introduces the use of hardware and software for production and design in graphic arts. Topics include graphical user interface and current industry uses such as design, layout, typography, illustration, and imaging for production. Upon completion, students should be able to understand and use the computer as a fundamental design and production tool.

**GRA 152. Computer Graphics II. 2.0 Credits.** Class-1.0. Clinical-0.0. Lab-3.0. Work-0.0

This course covers advanced design and layout concepts utilizing illustration, page layout, and imaging software in graphic arts. Emphasis is placed on enhancing and developing the skills that were introduced in GRA 151. Upon completion, students should be able to select and utilize appropriate software for design and layout solutions.

Prerequisites: Take GRA 151

**GRA 153. Computer Graphics III. 2.0 Credits.** Class-1.0. Clinical-0.0. Lab-3.0. Work-0.0

This course is a continuation of GRA 152. Emphasis is placed on advanced computer graphics hardware and software applications. Upon completion, students should be able to demonstrate competence in selection and utilization of appropriate software for specialized applications.

Prerequisites: Take GRA 152

**GRA 154. Computer Graphics IV. 2.0 Credits.** Class-1.0. Clinical-0.0. Lab-3.0. Work-0.0

This course is a continuation of GRA 153. Emphasis is placed on advanced techniques using a variety of hardware and software applications to produce complex projects. Upon completion, students should be able to use electronic document production tools.

Prerequisites: Take GRA 153

**GRA 161. Computer Graphics Applications I. 1.0 Credit.** Class-0.0. Clinical-0.0. Lab-3.0. Work-0.0

This course is designed to provide additional hands-on training using computer software and hardware for production and design in graphic arts. Emphasis is placed on utilizing various computer software and hardware to produce simple graphic arts projects. Upon completion, students should be able to use the computer as a graphic arts production tool.

Corequisites: Take GRA 151

**GRA 162. Computer Graphics Applications II. 1.0 Credit.** Class-0.0. Clinical-0.0. Lab-3.0. Work-0.0

This course is designed to provide additional hands-on training using computer software and hardware for production and design in graphic arts. Emphasis is placed on utilizing various computer software and hardware to produce intermediate graphic arts projects. Upon completion, students should be able to effectively use the computer as a graphic arts production tool.

Corequisites: Take GRA 152

**GRA 163. Computer Graphics Applications III. 1.0 Credit.** Class-0.0. Clinical-0.0. Lab-3.0. Work-0.0

This course is designed to provide additional hands-on training using computer software and hardware for production and design in graphic arts. Emphasis is placed on utilizing various computer software and hardware to produce advanced graphic arts projects. Upon completion, students should be able to effectively use the computer as a graphic arts production tool.

Corequisites: Take GRA 153

**GRA 164. Computer Graphics Applications IV. 1.0 Credit.** Class-0.0. Clinical-0.0. Lab-3.0. Work-0.0

This course is designed to provide additional hands-on training using computer software and hardware for production and design in graphic arts. Emphasis is placed on utilizing various computer software and hardware to produce professional quality graphic arts projects. Upon completion, students should be able to effectively and efficiently use the computer as a graphic arts production tool.

Corequisites: Take GRA 154

**GRA 221. Graphic Arts II. 4.0 Credits.** Class-2.0. Clinical-0.0. Lab-4.0. Work-0.0

This course is a continuation of GRA 121. Topics include multi-color image preparation, pre-press production, control of close/hairline register in image assembly and press operation, and post-press procedures. Upon completion, students should be able to demonstrate competence in all phases of graphic arts production.

Prerequisites: Take All: GRA 121 and GRA 151

**GRA 222. Graphic Arts III. 4.0 Credits.** Class-2.0. Clinical-0.0. Lab-4.0. Work-0.0

This course is a continuation of GRA 221. Topics include advanced electronic pre-press, press operation, and post-press procedures. Upon completion, students should be able to demonstrate competence in all phases of advanced graphic arts production.

Prerequisites: Take All: GRA 221 and GRA 152

**GRA 230. Substrates & Ink. 2.0 Credits.** Class-2.0. Clinical-0.0. Lab-0.0. Work-0.0

This course covers the manufacture, purchase, and use of printing substrates and inks in the graphic arts industry. Topics include the history, development, testing, purchasing, and use of ink, paper, and specialty substrates used in printing, as well as problems associated with each. Upon completion, students should be able to demonstrate an understanding of ink and substrate relationships in the design, planning, purchase, and production of a printed job.

**GRA 245. Printing Sales/Service. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course covers the operation of a sales, marketing, and service program for a printing company or printing supplier. Topics include marketing, prospecting, telephone sales, customer service, order entry, closing the sale, and answering objections. Upon completion, students should be able to understand the operation of sales and service in printing and printing supply organizations.

**GRA 252. Imaging Techniques. 3.0 Credits.** Class-1.0. Clinical-0.0. Lab-4.0. Work-0.0

This course covers electronic imaging and transfer and display of digital images through various media. Topics include analysis of electronic imaging, including uses, medium, outcome, storage, and display hardware and software. Upon completion, students should be able to demonstrate an understanding of electronic imaging techniques and purposes and complete related assignments.

Prerequisites: Take One: GRA 151 or GRD 151

**GRA 255. Image Manipulation I. 2.0 Credits.** Class-1.0. Clinical-0.0. Lab-3.0. Work-0.0

This course covers applications associated with electronic image manipulation, including color correction, color separation, special effects, and image conversion. Topics include image-capturing hardware, image-processing software, and output options. Upon completion, students should be able to utilize hardware and software to acquire, manipulate, and output images to satisfy design and production.

Prerequisites: Take One: GRA 151 or GRD 151

**GRA 256. Image Manipulation II. 2.0 Credits.** Class-1.0. Clinical-0.0. Lab-3.0. Work-0.0

This course covers electronic color separation and its relationship to multi-color printing. Topics include color theory, separation, color matching, proofing, and output of process and spot color images. Upon completion, students should be able to use hardware and image processing software to produce color separations and proofs for various printing processes. Prerequisites: Take GRA 255

## Graphic Design (GRD)

**GRD 110. Typography I. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0

This course introduces the history and mechanics of type and its application to layout and design. Topics include typographic fundamentals, anatomy, measurements, composition, identification, and terminology. Upon completion, students should be able to demonstrate proficiency in design application, analysis, specification, and creation of typographic elements.

Prerequisites: Take GRD 141 GRD 151

**GRD 111. Typography II. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0

This course is a continuation of GRD 110. Emphasis is placed on solving challenging typographic problems. Upon completion, students should be able to understand and demonstrate advanced typographic applications. Prerequisites: Take GRD 142 GRD 152

**GRD 113. History of Graphic Design. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course covers the history of graphic design and visual communications. Topics include major trends, developments, influences, and directions. Upon completion, students should be able to understand, recognize, and analyze important historical and world-wide cultural influences found in today's marketing of ideas and products.

**GRD 121. Drawing Fundamentals I. 2.0 Credits.** Class-1.0. Clinical-0.0. Lab-3.0. Work-0.0

This course increases observation skills using basic drawing techniques and media in graphic design. Emphasis is placed on developing the use of graphic design principles, media applications, spatial considerations, drawing styles, and approaches. Upon completion, students should be able to show competence and proficiency in finished works.

**GRD 131. Illustration I. 2.0 Credits.** Class-1.0. Clinical-0.0. Lab-3.0. Work-0.0

This course introduces the application of rendering techniques to create illustrations. Emphasis is placed on controlling various media, methods, surfaces, design problems, and the appropriate media selection process. Upon completion, students should be able to produce quality illustrations from conception through finished artwork.

Prerequisites: Take One: ART 131, DES 125, or GRD 121

**GRD 132. Illustration II. 2.0 Credits.** Class-1.0. Clinical-0.0. Lab-3.0. Work-0.0

This course is a continuation of GRD 131. Topics include editorial, product, fashion, and advertising illustrations. Upon completion, students should be able to demonstrate increased proficiency in creating quality illustrations from conceptualization through finished artwork.

Prerequisites: Take GRD 131

**GRD 141. Graphic Design I. 4.0 Credits.** Class-2.0. Clinical-0.0. Lab-4.0. Work-0.0

This course introduces the conceptualization process used in visual problem solving. Emphasis is placed on learning the principles of design and on the manipulation and organization of elements. Upon completion, students should be able to apply design principles and visual elements to projects.

Corequisites: Take GRD 151 or GRA 151

**GRD 142. Graphic Design II. 4.0 Credits.** Class-2.0. Clinical-0.0. Lab-4.0. Work-0.0

This course covers the application of visual elements and design principles in advertising and graphic design. Topics include creation of various designs, such as logos, advertisements, posters, outdoor advertising, and publication design. Upon completion, students should be able to effectively apply design principles and visual elements to projects.

Prerequisites: Take GRD 151

Corequisites: Take GRD 152

**GRD 151. Computer Design Basics. 3.0 Credits.** Class-1.0. Clinical-0.0. Lab-4.0. Work-0.0

This course covers designing and drawing with various types of software applications for advertising and graphic design. Emphasis is placed on creative and imaginative use of space, shapes, value, texture, color, and typography to provide effective solutions to advertising and graphic design problems. Upon completion, students should be able to use the computer as a creative tool.

Corequisites: Take GRD 141

**GRD 152. Computer Design Techniques I. 3.0 Credits.** Class-1.0. Clinical-0.0. Lab-4.0. Work-0.0

This course covers complex design problems utilizing various design and drawing software applications. Topics include the expressive use of typography, image, and organization to communicate a message. Upon completion, students should be able to use appropriate computer software to professionally present their work.

Prerequisites: Take GRD 141

Corequisites: Take GRD 142

**GRD 167. Photographic Imaging I. 3.0 Credits.** Class-1.0. Clinical-0.0. Lab-4.0. Work-0.0

This course introduces basic camera operations and photographic production. Topics include subject composition, depth of field, shutter control, light control, color, photo-finishing, and digital imaging, correction and output. Upon completion, students should be able to produce traditional and/or digital photographic prints with acceptable technical and compositional quality.

Prerequisites: Take GRD 151 with a minimum grade of C

**GRD 180. Interactive Design. 3.0 Credits.** Class-1.0. Clinical-0.0. Lab-4.0. Work-0.0

This course covers skills and techniques used in designing interactive presentations. Emphasis is placed on design, including interface design, color, illustration, scripting, audio, typography, and animated elements. Upon completion, students should be able to design and produce interactive presentations.

Prerequisites: Take GRD 151, or GRA 151

Take GRD 152

**GRD 188. Graphic Design for Web I. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0

This course introduces the application of graphic design principles to web sites and graphics for web/mobile device delivery. Emphasis is placed on visual communication and presentation principles applied to web sites, including page layout, typography, color theory, navigation, responsive design, and image optimization. Upon completion, students should be able to apply the principles of design in the creation of full and mobile websites. Prerequisites: Take GRD 141

**GRD 241. Graphic Design III. 4.0 Credits.** Class-2.0. Clinical-0.0. Lab-4.0. Work-0.0

This course is an advanced exploration of various techniques and media for advertising and graphic design. Emphasis is placed on advanced concepts and solutions to complex and challenging graphic design problems. Upon completion, students should be able to demonstrate competence and professionalism in visual problem solving.

Prerequisites: Take GRD 110 GRD 152

Corequisites: Take GRD 265

**GRD 242. Graphic Design IV. 4.0 Credits.** Class-2.0. Clinical-0.0. Lab-4.0. Work-0.0

This course is a continuation of GRD 241. Emphasis is placed on using advanced media techniques, concepts, strategies, and professionalism in all aspects of design. Upon completion, students should be able to conceptualize, create, and produce designs for reproduction. The course emphasizes the business of design and design for business.

Prerequisites: Take GRD 111 GRD 241

Corequisites: Take GRD 265

**GRD 263. Illustrative Imaging. 3.0 Credits.** Class-1.0. Clinical-0.0. Lab-4.0. Work-0.0

This course covers the creative manipulation of images utilizing digital techniques of masking, layering, airbrushing, and painting. Topics include the aesthetic analysis of visual imagery as well as the legalities of manipulating images. Upon completion, students should be able to utilize software applications to creatively manipulate and illustratively build digital images which accomplish design objectives.

Prerequisites: Take One: GRD 151 or GRA 151

**GRD 265. Digital Print Production. 3.0 Credits.** Class-1.0. Clinical-0.0. Lab-4.0. Work-0.0

This course covers preparation of digital files for output and reproduction. Emphasis is placed on output options, separations, color proofing, and cost and design considerations. Upon completion, students should be able to prepare files and select appropriate output methods for design solutions.

Prerequisites: Take GRD 152

Corequisites: Take GRD 241

**GRD 271. Multimedia Design I. 2.0 Credits.** Class-1.0. Clinical-0.0. Lab-3.0. Work-0.0

This course introduces the fundamentals of multimedia design and production for computer-related presentations. Topics include interface design, typography, storyboarding, scripting, simple animation, graphics, digital audiovideo, and copyright issues. Upon completion, students should be able to design and produce multimedia presentations.

Prerequisites: Take One: GRD 151 or GRA 151

**GRD 273. New Media Design Communication. 2.0 Credits.** Class-1.0. Clinical-0.0. Lab-3.0. Work-0.0

This course is designed to cover new media visual design communication, as well as computer-related interactivity production for implementation and presentation. Topics include graphic design for user interactivity, data visualization and motion graphics, social media, digital imaging for user content, mobile devices, and global information services, and creative direction for imaging, 2D and 3D modeling media design solutions. Upon completion, students should be able to design and produce various complex media with computer software imaging technologies that enable digital interactivity as well as motion graphics for global information services.

Prerequisites: Complete one of the following options: Take DES 135 and GRD 271

Take GRD 142 and GRD 271

**GRD 280. Portfolio Design. 4.0 Credits.** Class-2.0. Clinical-0.0. Lab-4.0. Work-0.0

This course covers the organization and presentation of a design/ advertising or graphic art portfolio and appropriate related materials. Emphasis is placed on development and evaluation of the portfolio, design and production of a resume and self-promotional materials, and interview techniques. Upon completion, students should be able to prepare and professionally present an effective portfolio and related self-promotional materials.

Prerequisites: Take GRD 242 GRD 282 GRD 288 GRD 131

Take ENG 111 COM 231 ART 115 MAT 110

**GRD 282. Advertising Copywriting. 2.0 Credits.** Class-1.0. Clinical-0.0. Lab-2.0. Work-0.0

This course covers copywriting for print, electronic, and broadcast advertising and promotion. Topics include advertising strategies, proposals, headlines, slogans, and text copy for various types of advertising. Upon completion, students should be able to write and articulate advertising proposals and understand the ethical and regulatory environment for advertising.

Prerequisites: Take GRD 241 GRD 265

Corequisites: Take GRD 242

**GRD 285. Client/Media Relations. 2.0 Credits.** Class-1.0. Clinical-0.0. Lab-2.0. Work-0.0

This course introduces media pricing, scheduling, and business ethics. Emphasis is placed on communication with clients and determination of clients' advertising needs. Upon completion, students should be able to use professional communication skills to effectively orchestrate client/ media relationships.

Prerequisites: Complete one of the following options: Take GRD 142 and GRA 121

Take GRD 142 and GRA 152

Take GRD 142 and GRD 152

Take GRD 241

**GRD 288. Graphic Design for Web II. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0

This course covers the advanced use of graphic design principles in front-end design for the multi-page websites. Emphasis is placed on online branding, responsive design, project management, UI/UX, web design using current web standards, and designing for content management systems. Upon completion, students should be able to employ the principles of design in the creation of websites across multiple platforms and devices.

Prerequisites: Take GRD 188

## Health (HEA)

**HEA 110. Personal Health/Wellness. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course provides an introduction to basic personal health and wellness. Emphasis is placed on current health issues such as nutrition, mental health, and fitness. Upon completion, students should be able to demonstrate an understanding of the factors necessary to the maintenance of health and wellness.

**HEA 112. First Aid & CPR. 2.0 Credits.** Class-1.0. Clinical-0.0. Lab-2.0. Work-0.0

This course introduces the basics of emergency first aid treatment. Topics include rescue breathing, CPR, first aid for choking and bleeding, and other first aid procedures. Upon completion, students should be able to demonstrate skills in providing emergency care for the sick and injured until medical help can be obtained.

## Health Information Technology (HIT)

**HIT 110. Fundamentals of Health Information Management. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course introduces Health Information Management (HIM) and its role in healthcare delivery systems. Topics include standards, regulations and initiatives; payment and reimbursement systems, healthcare providers and disciplines; and electronic health records (EHRs). Upon completion, students should be able to demonstrate an understanding of health information management and healthcare organizations, professions and trends.

**HIT 112. Health Law and Ethics. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course covers legislative and regulatory processes, legal terminology, and professional-related and practice-related ethical issues. Topics include confidentiality; privacy and security policies, procedures and monitoring; release of information policies and procedures; and professional-related and practice-related ethical issues. Upon completion, students should be able to apply policies and procedures for access and disclosure of Protected Health Information and apply and promote ethical standards.

**HIT 114. Health Data Systems and Standards. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0

This course covers concepts and techniques for managing and maintaining manual and electronic health records (EHR). Topics include structure and use of health information including data collection and analysis, data sources/sets, archival systems, and quality and integrity of healthcare data. Upon completion, students should be able to monitor and apply system-wide clinical documentation guidelines and comply with regulatory standards.

**HIT 122. Professional Practice Experience I. 1.0 Credit.** Class-0.0. Clinical-3.0. Lab-0.0. Work-0.0

This course provides supervised clinical experience in healthcare settings. Emphasis is placed on practical application of curriculum concepts to the healthcare setting. Upon completion, students should be able to apply health information theory to healthcare facility practices.  
Corequisites: Take HIT 220

**HIT 124. Professional Practice Experience II. 1.0 Credit.** Class-0.0. Clinical-3.0. Lab-0.0. Work-0.0

This course provides supervised clinical experience in healthcare settings. Emphasis is placed on practical application of curriculum concepts to the healthcare setting. Upon completion, students should be able to apply health information theory to healthcare facility practices.

**HIT 210. Healthcare Statistics. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0

This course covers maintenance, compilation, analysis, and presentation of healthcare statistics and research protocols and techniques. Topics include basic statistical principles, indices, databases, registries, vital statistics, descriptive statistics, research protocol monitoring, Institutional Review Board processes, and knowledge-based research techniques. Upon completion, students should be able to apply, interpret, and present healthcare statistics and utilize research techniques to gather and interpret healthcare data.

Prerequisites: Take MAT 110 Minimum grade C

Corequisites: Take HIT 220

**HIT 211. ICD Coding. 4.0 Credits.** Class-2.0. Clinical-0.0. Lab-6.0. Work-0.0

This course covers ICD diagnostics and procedural coding conventions and guidelines for inpatient, outpatient and ambulatory care. Emphasis is placed on a comprehensive application of anatomy, physiology and interrelationships among organ systems. Upon completion, students should be able to accurately assign and sequence diagnostic and procedural codes for patient outcomes, statistical and reimbursement purposes.

**HIT 214. CPT/Other Coding Systems. 2.0 Credits.** Class-1.0. Clinical-0.0. Lab-3.0. Work-0.0

This course covers application of principles and guidelines of CPT/HCPCS coding. Topics include clinical classification/nomenclature systems such as SNOMED, DSM, ICD-O and the use of encoders. Upon completion, students should be able to apply coding principles to correctly assign CPT/HCPCS codes.

Prerequisites: Take HIT 211 Minimum grade C

**HIT 215. Reimbursement Methodology. 2.0 Credits.** Class-1.0. Clinical-0.0. Lab-2.0. Work-0.0

This course covers reimbursement methodologies used in all healthcare settings as they relate to national billing, compliance, and reporting requirements. Topics include prospective payment systems, billing process and procedures, chargemaster maintenance, regulatory guidelines, reimbursement monitoring, and compliance strategies and reporting. Upon completion, students should be able to perform data quality reviews to validate code assignment and comply with reimbursement and reporting requirements.

**HIT 216. Quality Management. 2.0 Credits.** Class-1.0. Clinical-0.0. Lab-3.0. Work-0.0

This course introduces principles of quality assessment and improvement, and utilization, risk, and case management, in healthcare. Topics include Continuous Quality Improvement, and case management processes, data analysis/reporting techniques, credentialing, regulatory quality monitoring requirements, and outcome measures and monitoring. Upon completion, students should be able to abstract, analyze, and report clinical data for facility-wide quality management/performance improvement programs and monitor compliance measures.

Prerequisites: Take HIT 114 Minimum grade C

Corequisites: Take HIT 214 HIT 215 HIT 280



**HIT 218. Management Principles in HIT. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course covers organizational management concepts as applied to healthcare settings. Topics include roles/functions of teams/committees, leadership, communication and interpersonal skills, designing and implementing orientation/training programs, monitoring workflow, performance standards, revenue cycles, and organizational resources. Upon completion, students should be able to apply management, leadership, and supervisory concepts to various healthcare settings.

**HIT 220. Health Informatics & EHRs. 2.0 Credits.** Class-1.0. Clinical-0.0. Lab-2.0. Work-0.0

This course covers EHR systems, design, implementation and application. Topics include EHR, Informatics, speech & imaging technology, information/network security & integrity, data dictionaries, modeling and warehousing. Upon completion, students should be able to facilitate usage of electronic health record systems and other technologies.

Prerequisites: Take HIT 114 CIS 110 with a minimum grade of C  
Take HIT 114 CIS 111 with a minimum grade of C

**HIT 221. Lifecycle of Electronic Health Record. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0

This course covers the system selection, design and implementation of an electronic health record (EHR) in integrated delivery networks. Topics include the system development life cycle, analysis of existing systems, required resources, and common resource constraints. Upon completion, students should be able to understand system development life cycles, analyze design and engineering, and make recommendations to improve efficiency of operations.

Prerequisites: Take HIT 110 HIT 114

Corequisites: Take HIT 225

**HIT 222. Prof Practice Exp III. 2.0 Credits.** Class-0.0. Clinical-6.0. Lab-0.0. Work-0.0

This course provides supervised clinical experience in healthcare settings. Emphasis is placed on practical application of curriculum concepts to the healthcare setting. Upon completion, students should be able to apply health information theory to healthcare facility practices.

**HIT 225. Healthcare Informatics. 4.0 Credits.** Class-3.0. Clinical-0.0. Lab-2.0. Work-0.0

This course covers data analysis to support decision making, patient care, and regulatory compliance. Topics include clinical terminology and vocabulary systems, data capture methodology, data presentation and reporting, and initiatives to improve the quality of patient care. Upon completion, students should be able to identify data elements and sets, analyze capture methodology in healthcare settings, analyze compliance issues and make improvement recommendations.

Prerequisites: Take HIT 110 HIT 114

Corequisites: Take HIT 221

**HIT 226. Principles of Disease. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course covers disease etiology and organ system involvement, including physical signs and symptoms, prognoses, and common complications and their management. Topics include basic microbiology, basic pharmacology, and principles of disease. Upon completion, students should be able to relate disease processes to etiology, physical signs and symptoms, prognosis, and common complications and their management.

Prerequisites: Take BIO 166 or BIO 169 Minimum grade C

**HIT 227. Informatics Project Management. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0

This course covers the required skills needed for implementing healthcare IT applications, with emphasis on electronic health records (EHR). Topics include leadership development skills, interdisciplinary collaboration, organizational change management, project management software, and the study of communication skills required across healthcare disciplines. Upon completion, students should be able to effectively collaborate and communicate with healthcare disciplines to implement informatics projects within the healthcare setting.

Prerequisites: Take HIT 110 HIT 114

Corequisites: Take HIT 221 and HIT 225

**HIT 280. Professional Issues. 2.0 Credits.** Class-2.0. Clinical-0.0. Lab-0.0. Work-0.0

This course provides a comprehensive discussion of topics common to the health information profession. Emphasis is placed on application of professional competencies, job search tools, and preparation for the certification examination. Upon completion, students should be able to demonstrate competence in entry-level domains and subdomains for health information technologies.

Prerequisites: Take HIT 211 Minimum grade C

Corequisites: Take DBA 112, HIT 214, HIT 215 and HIT 216

## Heavy Equipment Maintenance (HET)

**HET 110. Diesel Engines. 6.0 Credits.** Class-3.0. Clinical-0.0. Lab-9.0. Work-0.0

This course introduces theory, design, terminology, and operating adjustments for diesel engines. Emphasis is placed on safety, theory of operation, inspection, measuring, and rebuilding diesel engines according to factory specifications. Upon completion, students should be able to measure, diagnose problems, and repair diesel engines.

**HET 114. Power Trains. 5.0 Credits.** Class-3.0. Clinical-0.0. Lab-6.0. Work-0.0

This course introduces power transmission devices. Topics include function and operation of gears, chains, clutches, planetary gears, drive lines, differentials, and transmissions. Upon completion, students should be able to identify, research specifications, repair, and adjust power train components.

**HET 115. Electronic Engines. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0

This course introduces the principles of electronically controlled diesel engines. Emphasis is placed on testing and adjusting diesel engines in accordance with manufacturers' specifications. Upon completion, students should be able to diagnose, test, and calibrate electronically controlled diesel engines.

**HET 125. Preventive Maintenance. 2.0 Credits.** Class-1.0. Clinical-0.0. Lab-3.0. Work-0.0

This course introduces preventive maintenance practices used on medium and heavy duty vehicles and rolling assemblies. Topics include preventive maintenance schedules, services, DOT rules and regulations, and road ability. Upon completion, students should be able to set up and follow a preventive maintenance schedule as directed by manufacturers.

**HET 126. Preventive Maintenance Lab. 1.0 Credit.** Class-0.0. Clinical-0.0. Lab-3.0. Work-0.0

This course provides a laboratory setting to enhance preventive maintenance practices used on medium and heavy duty vehicles and rolling assemblies. Emphasis is placed on practical experiences that enhance the topics presented in HET 125. Upon completion, students should be able to apply the laboratory experiences to the concepts presented in HET 125.

Corequisites: Take HET 125

**HET 128. Medium/Heavy Duty Tune Up. 2.0 Credits.** Class-1.0. Clinical-0.0. Lab-2.0. Work-0.0

This course introduces tune-up and troubleshooting according to manufacturers' specifications. Topics include troubleshooting engine systems, tune-up procedures, and use and care of special test tools and equipment. Upon completion, students should be able to troubleshoot, diagnose, and repair engines and components using appropriate diagnostic equipment.

**HET 230. Air Brakes. 2.0 Credits.** Class-1.0. Clinical-0.0. Lab-2.0. Work-0.0

This course introduces the operation and design of air braking systems used on trucks. Topics include safety, governors, compressors, and supporting systems. Upon completion, students should be able to diagnose, disassemble, inspect, repair, and reassemble air brake systems.

**HET 231. Medium/Heavy Duty Brake Systems. 2.0 Credits.** Class-1.0. Clinical-0.0. Lab-3.0. Work-0.0

This course covers the theory and repair of braking systems used in medium and heavy-duty vehicles. Topics include air, hydraulic, and ABS system diagnosis and repair. Upon completion, students should be able to troubleshoot, adjust, and repair braking systems on medium and heavy-duty vehicles.

**HET 232. Medium/Heavy Duty Brake Systems Lab. 1.0 Credit.** Class-0.0. Clinical-0.0. Lab-3.0. Work-0.0

This course provides a laboratory setting to enhance the skills for troubleshooting, adjusting, and repairing brake systems on medium and heavy duty vehicles. Emphasis is placed on practical experiences that enhance the topics presented in HET 231. Upon completion, students should be able to apply the laboratory experiences to the concepts presented in HET 231.

Corequisites: Take HET 231

**HET 233. Suspension and Steering. 4.0 Credits.** Class-2.0. Clinical-0.0. Lab-4.0. Work-0.0

This course introduces the theory and principles of medium and heavy duty steering and suspension systems. Topics include wheel and tire problems, frame members, fifth wheel, bearings, and coupling systems. Upon completion, students should be able to troubleshoot, adjust, and repair suspension and steering components on medium and heavy duty vehicles.

## History (HIS)

**HIS 111. World Civilizations I. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course introduces world history from the dawn of civilization to the early modern era. Topics include Eurasian, African, American, and Greco-Roman civilizations and Christian, Islamic and Byzantine cultures. Upon completion, students should be able to analyze significant political, socioeconomic, and cultural developments in pre-modern world civilizations. Students seeking to take this course to meet the college transfer Social/Behavioral Sciences requirement may also take HIS 112 (no HIS prerequisites).

Prerequisites: Complete one of the following options: Take DRE 098

Take EFL 111 EFL 112 with a minimum grade of C

Take ENG 111 with a minimum grade of C

**HIS 112. World Civilizations II. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course introduces world history from the early modern era to the present. Topics include the cultures of Africa, Europe, India, China, Japan, and the Americas. Upon completion, students should be able to analyze significant political, socioeconomic, and cultural developments in modern world civilizations. Students seeking to take this course to meet the college transfer Social/Behavioral Sciences requirement may also take HIS 111 (no HIS prerequisites).

Prerequisites: Complete one of the following options: Take DRE 098

Take EFL 111 EFL 112 with a minimum grade of C

Take ENG 111 with a minimum grade of C

**HIS 131. American History I. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course is a survey of American history from pre-history through the Civil War era. Topics include the migrations to the Americas, the colonial and revolutionary periods, the development of the Republic, and the Civil War. Upon completion, students should be able to analyze significant political, socioeconomic, and cultural developments in early American history. Students seeking to take this course to meet the college transfer Social/Behavioral Sciences requirement may also take HIS 132 (no HIS prerequisites).

Prerequisites: Complete one of the following options: Take DRE 098

Take EFL 111 EFL 112 with a minimum grade of C

Take ENG 111 with a minimum grade of C

**HIS 132. American History II. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course is a survey of American history from the Civil War era to the present. Topics include industrialization, immigration, the Great Depression, the major American wars, the Cold War, and social conflict. Upon completion, students should be able to analyze significant political, socioeconomic, and cultural developments in American history since the Civil War. Students seeking to take this course to meet the college transfer Social/Behavioral Sciences requirement may also take HIS 131 (no HIS prerequisites).

Prerequisites: Complete one of the following options: Take DRE 098

Take EFL 111 EFL 112 with a minimum grade of C

Take ENG 111 with a minimum grade of C

**HIS 141. Genealogy & Local History. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course explores the role of the local or family historian. Emphasis is placed on historical or genealogical research techniques including a survey of local, state, and national archival resources. Upon completion, students should be able to conduct genealogical research and do a major research project on local or family history.

Prerequisites: Complete one of the following options: Take DRE 098  
Take EFL 111 EFL 112 with a minimum grade of C  
Take ENG 111 with a minimum grade of C

**HIS 162. Women and History. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course surveys the experience of women in historical perspective. Topics include the experiences and contributions of women in culture, politics, economics, science, and religion. Upon completion, students should be able to analyze significant political, socioeconomic, and cultural contributions of women in history.

**HIS 165. Twentieth-Century World. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course includes the major developments, issues, and ideas in twentieth-century world history. Emphasis is placed on contrasting political systems, the impact of science and technology, and the philosophical temperament of twentieth-century people. Upon completion, students should be able to analyze significant political, socioeconomic, and cultural developments in the twentieth century.

Prerequisites: Complete one of the following options: Take DRE 098  
Take EFL 111 EFL 112 with a minimum grade of C  
Take ENG 111 with a minimum grade of C

**HIS 221. African-American History. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course covers African-American history from the Colonial period to the present. Topics include African origins, the slave trade, the Civil War, Reconstruction, the Jim Crow era, the civil rights movement, and contributions of African Americans. Upon completion, students should be able to analyze significant political, socioeconomic, and cultural developments in the history of African Americans.

**HIS 222. African-American History I. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course covers African American history through the Civil War period. Topics include African origins, the nature of slavery, African-American participation in the American Revolution, abolitionism, and the emergence of a distinct African-American culture. Upon completion, students should be able to analyze significant political, socioeconomic, and cultural developments in early African-American history.

**HIS 223. African-American History II. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course covers African American history from the Civil War to the present. Topics include Reconstruction, the Jim Crow era, urbanization, the Harlem Renaissance, the Civil Rights movement, and the philosophies of major African-American leaders. Upon completion, students should be able to analyze significant political, socioeconomic, and cultural developments in African-American history since the Civil War.

**HIS 226. The Civil War. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course examines the social, political, economic, and ideological forces that led to the Civil War and Reconstruction. Topics include regional conflicts and sectionalism, dissolution of the Union, military campaigns, and the War's socioeconomic impact, aftermath, and consequences. Upon completion, students should be able to analyze significant political, socioeconomic, and cultural developments in the United States during the era of the Civil War.

Prerequisites: Complete one of the following options: Take DRE 098  
Take EFL 111 EFL 112 with a minimum grade of C  
Take ENG 111 with a minimum grade of C

**HIS 227. Native American History. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course surveys the history and cultures of Native Americans from pre-history to the present. Topics include Native American civilizations, relations with Europeans, and the continuing evolution of Native American cultures. Upon completion, students should be able to analyze significant political, socioeconomic, and cultural developments among Native Americans.

**HIS 228. History of the South. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course covers the origin and development of the South as a distinct region of the United States. Emphasis is placed on Southern identity and its basis in cultural, social, economic, and political developments during the 19th and 20th centuries. Upon completion, students should be able to identify and analyze the major cultural, social, economic, and political developments in the South.

**HIS 229. History of the Old South. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course is a study of the development of the South from European settlement through the Civil War. Topics include the multi-ethnic character of colonization, the plantation economy, relations between social classes, the nature of slavery, and issues leading to the Civil War. Upon completion, students should be able to analyze significant political, socioeconomic, and cultural developments in the antebellum South.

**HIS 230. The Changing South. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course covers major developments in the South from the Civil War era to the present. Topics include Reconstruction, the emergence of the New South, segregation, the Civil Rights movement, and current issues and challenges facing the South. Upon completion, students should be able to analyze significant political, socioeconomic, and cultural developments in the New South.

**HIS 231. Recent American History. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course is a study of American society from the post-Depression era to the present. Topics include World War II, the Cold War, social unrest, the Vietnam War, the Great Society, and current political trends. Upon completion, students should be able to analyze significant political, socioeconomic, and cultural developments in recent America.

**HIS 233. History of Appalachia. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course introduces the Appalachian region and its relationship to mainstream American history. Topics include regional settlement patterns and a study of Appalachian culture. Upon completion, students should be able to analyze significant political, socioeconomic, and cultural developments in Appalachia.

**HIS 234. Cherokee History. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course is a survey of the history and culture of the Cherokees. Topics include origins, belief systems, contact and conflict with European settlers, removals, and contemporary problems faced by the Cherokees. Upon completion, students should be able to analyze significant political, socioeconomic, and cultural developments in Cherokee history.

**HIS 236. North Carolina History. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course is a study of geographical, political, economic, and social conditions existing in North Carolina from America's discovery to the present. Topics include native and immigrant backgrounds; colonial, antebellum, and Reconstruction periods; party politics; race relations; and the transition from an agrarian to an industrial economy. Upon completion, students should be able to analyze significant political, socioeconomic, and cultural developments in North Carolina.

**HIS 260. History of Africa. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course surveys the history of Africa from pre-history to the present. Emphasis is placed on the evolution of social, political, economic, and governmental structures in Africa. Upon completion, students should be able to analyze significant political, socioeconomic, and cultural developments in Africa.

Prerequisites: Complete one of the following options: Take DRE 098  
Take EFL 111 EFL 112 with a minimum grade of C  
Take ENG 111 with a minimum grade of C

**HIS 261. East Asian History. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course surveys the history of China and Japan from the development of civilization in Asia to the present. Emphasis is placed on the evaluation of social, political, economic, and governmental structures in China and Japan. Upon completion, students should be able to analyze significant political, socioeconomic, and cultural developments in east Asia.

Prerequisites: Complete one of the following options: Take DRE 098  
Take EFL 111 EFL 112 with a minimum grade of C  
Take ENG 111 with a minimum grade of C

**HIS 262. Middle East History. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course surveys the history of the Middle East from the development of civilization in Mesopotamia to the present. Emphasis is placed on social, political, economic, religious, and governmental structures in the Middle East. Upon completion, students should be able to analyze significant political, socioeconomic, and cultural developments in the Middle East.

Prerequisites: Complete one of the following options: Take DRE 098  
Take EFL 111 EFL 112 with a minimum grade of C  
Take ENG 111 with a minimum grade of C

**HIS 271. The French Revolution Era. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course traces the causes and effects of the French Revolution. Topics include the Enlightenment; Jacobins; Reign of Terror; Napoleon's republic, empire, and wars; and the French Revolution's impact upon world history. Upon completion, students should be able to analyze significant political, socioeconomic, and cultural developments during the French revolutionary era.

## Horticulture (HOR)

**HOR 112. Landscape Design I. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0

This course covers landscape principles and practices for residential and commercial sites. Emphasis is placed on drafting, site analysis, and common elements of good design, plant material selection, and proper plant utilization (encouraged use of native plants and discouraged use of invasive species). Upon completion, students should be able to read plans and draft a landscape design according to sustainable practices.

Prerequisites: Take HOR 160 or HOR 161 Minimum grade C

**HOR 114. Landscape Construction. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0

This course introduces the design and fabrication of landscape structures/features. Emphasis is placed on safety, tool identification and use, material selection, construction techniques, and fabrication. Upon completion, students should be able to design and construct common landscape structures/features.

**HOR 116. Landscape Management I. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0

This course covers information and skills necessary to analyze a property and develop a management schedule. Emphasis is placed on property measurement, plant condition, analysis of client needs, and plant culture needs. Upon completion, students should be able to analyze a property, develop management schedules, and implement practices based on client needs.

**HOR 118. Equipment Operation and Maintenance. 2.0 Credits.** Class-1.0. Clinical-0.0. Lab-3.0. Work-0.0

This course covers the proper operation and maintenance of selected equipment used in horticulture. Emphasis is placed on the maintenance, minor repairs, safety devices, and actual operation of selected equipment. Upon completion, students should be able to design a maintenance schedule, service equipment, and demonstrate safe operation of selected equipment.

**HOR 124. Nursery Operations. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0

This course covers nursery site and crop selection, cultural practices, and production and marketing methods. Topics include site considerations, water availability, equipment, irrigation, fertilization, containers, media, and pest control. Upon completion, students should be able to design and implement a nursery operation and grow and harvest nursery crops.

**HOR 134. Greenhouse Operations. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0

This course covers the principles and procedures involved in the operation and maintenance of greenhouse facilities. Emphasis is placed on the operation of greenhouse systems, including the environmental control, record keeping, scheduling, and production practices. Upon completion, students should be able to demonstrate the ability to operate greenhouse systems and facilities to produce greenhouse crops.

**HOR 142. Fruit & Vegetable Production. 2.0 Credits.** Class-1.0. Clinical-0.0. Lab-2.0. Work-0.0

This course introduces the principles and techniques of growing fruits and field-grown vegetables. Topics include site selection, proper varietal selection, nutritional values, cultural techniques, harvesting and marketing, and insect and disease control. Upon completion, students should be able to demonstrate an understanding of the principles related to the production of selected fruits and vegetables.



**HOR 150. Introduction to Horticulture. 2.0 Credits.** Class-2.0. Clinical-0.0. Lab-0.0. Work-0.0

This course covers the history, development, and basic techniques of horticulture. Topics include propagation techniques, planting procedures, watering and fertility, plant growth, pest and disease control, and garden design and history. Upon completion, students should be able to demonstrate an understanding of the basic principles of horticulture. Students will explore horticultural careers, organizations, and reference materials.

**HOR 154. Introduction to Horticulture Therapy. 4.0 Credits.** Class-2.0. Clinical-0.0. Lab-4.0. Work-0.0

This course introduces the concept of horticulture therapy and how it can be applied to improve human well-being. Emphasis is placed on developing a horticulture therapy program, planning activities, and adjusting activities based on the age, disability, or need of the individual. Upon completion, students should be able to develop project ideas, write lesson plans, and lead informal classes using horticulture therapy techniques.

**HOR 160. Plant Materials I. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0

This course covers identification, culture, characteristics, and use of plants in a sustainable landscape. Emphasis is placed on nomenclature, identification, growth requirements, cultural requirements, soil preferences, and landscape applications. Upon completion, students should be able to demonstrate knowledge of the proper selection and utilization of plant materials, including natives and invasive plants.

**HOR 161. Plant Materials II. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0

This course provides a supplementary opportunity to cover identification, culture, characteristics, and use of plants in a sustainable landscape, giving students a broader knowledge of available landscape plants for utilization in landscapes and plant production. Emphasis is placed on nomenclature, identification, growth requirements, cultural requirements, soil preferences, landscape applications and expansion of the plant palette. Upon completion, students should be able to demonstrate knowledge of the proper selection and utilization of plant materials, including natives and invasive plants.

**HOR 162. Applied Plant Science. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0

This course introduces the basic concepts of botany as they apply to horticulture. Topics include nomenclature, physiology, morphology, and anatomy as they apply to plant culture. Upon completion, students should be able to apply the basic principles of botany to horticulture.

**HOR 164. Horticultural Pest Management. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0

This course covers the identification and management of plant pests including insects, diseases, and weeds. Topics include pest identification and beneficial organisms, pesticide application safety and use of least toxic methods of management. Upon completion, students should be able to manage common landscape pests using least toxic methods of control and be prepared to sit for North Carolina Commercial Pesticide Ground Applicators license. Students will apply the Integrated Pest Management Model in plant management.

**HOR 166. Soils and Fertilizers. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0

This course covers the physical and chemical properties of soils and soil fertility and management. Topics include soil formation; classification; physical, chemical, and biological properties (including microorganisms); testing; and fertilizer application. Upon completion, students should be able to analyze, evaluate, and properly amend soils/media according to sustainable practices.

**HOR 168. Plant Propagation. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0

This course is a study of sexual and asexual reproduction of plants. Emphasis is placed on seed propagation, grafting, stem and root propagation, micro-propagation, and other propagation techniques. Upon completion, students should be able to successfully propagate ornamental plants.

**HOR 170. Horticultural Computer Applications. 2.0 Credits.** Class-1.0. Clinical-0.0. Lab-3.0. Work-0.0

This course introduces computer programs as they apply to the horticulture industry. Emphasis is placed on applications of software for plant identification, design, and irrigation. Upon completion, students should be able to use computer programs in horticultural situations. Students will create a CAD drawing of a landscape.

Prerequisites: Take HOR 112

**HOR 213. Landscape Design II. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0

This course covers residential and commercial landscape design, cost analysis, and installation. Emphasis is placed on job cost estimates, installation of the landscape design, and maintenance techniques. Upon completion, students should be able to read landscape design blueprints, develop cost estimates, and implement the design.

Prerequisites: Take HOR 112

**HOR 215. Landscape Irrigation. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0

This course introduces basic irrigation design, layout, and installation. Topics include site analysis, components of irrigation systems, safety, types of irrigation systems, and installation techniques. Upon completion, students should be able to design and install basic landscape irrigation systems.

**HOR 217. Landscape Management II. 2.0 Credits.** Class-1.0. Clinical-0.0. Lab-3.0. Work-0.0

This course provides additional opportunities to design plans, write contracts, and present proposals. Emphasis is placed on the development, pricing, and presentation of proposals and additional exploration of cultural applications. Upon completion, students should be able to analyze a property, develop a management plan, and price and present that plan.

Prerequisites: Take One: HOR 110 or HOR 116

**HOR 218. Advanced Equipment Operations and Maintenance. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0

This course covers the advanced repair and operation of selected equipment utilized in horticulture. Topics include diagnosis, service, maintenance and complex repairs of small and medium two- and four-cycle engine horticultural equipment. Upon completion, students should be able to diagnose and repair commonly used landscape equipment and communicate information concerning the repairs and the necessary maintenance schedule in a professional manner.

Prerequisites: Take HOR 118

**HOR 225. Nursery Production. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0

This course covers all aspects of nursery crop production. Emphasis is placed on field production and covers soils, nutrition, irrigation, pest control, and harvesting. Upon completion, students should be able to produce a marketable nursery crop.

**HOR 235. Greenhouse Production. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0

This course covers the production of greenhouse crops. Emphasis is placed on product selection and production based on market needs and facility availability, including record keeping. Upon completion, students should be able to select and make production schedules to successfully produce greenhouse crops.

**HOR 245. Horticultural Specialty Crops. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0

This course introduces the techniques and requirements for the production of horticultural crops of special or local interest. Topics include development of a local market, proper varietal selection, cultural practices, site selection, and harvesting and marketing practices. Upon completion, students should be able to choose, grow, and market a horticultural crop of special or local interest.

**HOR 251. Insects & Diseases. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0

This course introduces insects and diseases of economic importance to horticultural crops. Topics include insect life cycles and identifying characteristics; plant diseases, including their signs and symptoms; control methods; and insect scouting for IPM. Upon completion, students should be able to demonstrate an understanding of insect and disease identification, collection, and control.

**HOR 253. Horticulture Turfgrass. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0

This course covers information and skill development necessary to establish and manage landscape turfgrasses. Topics include grass identification, establishment, cultural requirements, application of control products, fertilization, and overseeding techniques. Upon completion, students should be able to analyze a landscape site and determine those cultural and physical activities needed to establish or manage a quality turf.

**HOR 255. Interiorscapes. 2.0 Credits.** Class-1.0. Clinical-0.0. Lab-2.0. Work-0.0

This course covers plant selection, design, and management for interior settings. Topics include tropical plant identification, cultural requirements, insect and disease identification and control, and design and management requirements for interior plants. Upon completion, students should be able to design, install, and manage plants in interior settings.

**HOR 257. Arboriculture Practices. 2.0 Credits.** Class-1.0. Clinical-0.0. Lab-3.0. Work-0.0

This course covers the culture and maintenance of trees and shrubs. Topics include fertilization, pruning, approved climbing techniques, pest control, and equipment use and safety. Upon completion, students should be able to properly prune trees and shrubs and perform arboricultural practices.

**HOR 265. Advanced Plant Materials. 2.0 Credits.** Class-1.0. Clinical-0.0. Lab-2.0. Work-0.0

This course covers important landscape plants. Emphasis is placed on identification, plant nomenclature, growth characteristics, cultural requirements, and landscape uses. Upon completion, students should be able to correctly select plants for specific landscape uses.

Prerequisites: Take HOR 160 or HOR 161 Minimum grade C

**HOR 268. Advanced Propagation. 4.0 Credits.** Class-3.0. Clinical-0.0. Lab-3.0. Work-0.0

This course covers applied production techniques for asexual and sexual plant propagation. Emphasis is placed on the major accepted methods of asexual propagation and sexual propagation of woody ornamental plants, with evaluation of all initiated propagation. Upon completion, students should be able to successfully propagate a variety of plant materials utilizing methods covered in the course.

**HOR 273. Horticultural Management & Marketing. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course covers the steps involved in starting or managing a horticultural business. Topics include financing, regulations, market analysis, employer/employee relations, formulation of business plans, and operational procedures in a horticultural business. Upon completion, students should be able to assume ownership or management of a horticultural business.

## Hotel & Restaurant Management (HRM)

**HRM 110. Introduction to Hospitality and Tourism. 3.0 Credits.**

Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course covers the growth and progress of the hospitality industry. Topics include tourism, lodging, resorts, gaming, restaurants, foodservice and clubs. Upon completion, students should be able to demonstrate an understanding of the background, context, and career opportunities that exist within the hospitality industry.

Corequisites: Take CUL 110 CUL 111

**HRM 120. Front Office Procedures. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course introduces a systematic approach to lodging front office procedures. Topics include reservations, registration, guest satisfaction, occupancy and revenue management, security, interdepartmental communications, and related guest services. Upon completion, students should be able to demonstrate a basic understanding of current front office operating systems, including efficient and courteous guest services.

Prerequisites: Take CUL 111 with a minimum grade of C

**HRM 125. Etiquette for Hospitality. 1.0 Credit.** Class-1.0. Clinical-0.0. Lab-0.0. Work-0.0

This course covers social skills needed to effectively interact within organizational and customer situations. Topics include general social manners, personal appearance, table manners, restaurant and meeting etiquette, and business interaction. Upon completion, students should be able to function with confidence in various social, cultural, and professional situations.

Prerequisites: Take CUL 111 with a minimum grade of C

**HRM 140. Legal Issues-Hospitality. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course covers the rights and responsibilities that the law grants to or imposes upon the hospitality industry. Topics include federal and state regulations, historical and current practices, safety and security, risk management, loss prevention, relevant torts, and contracts. Upon completion, students should be able to demonstrate an understanding of the legal system and the concepts necessary to prevent or minimize organizational liability.

Prerequisites: Take CUL 111 with a minimum grade of C

**HRM 150. Training for Hospitality. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course introduces techniques and methodology involved in developing training programs. Topics include job specification/description and breakdown, current and traditional training methods, coaching, evaluation, and management development. Upon completion, students should be able to produce job specifications, descriptions and breakdowns, and conduct technical training.

Prerequisites: Take CUL 111 with a minimum grade of C

**HRM 210. Meetings and Event Planning. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course introduces concepts related to the planning and operation of conventions, trade shows, professional meetings, and foodservice events. Emphasis is placed on methods of marketing, selling, organizing, and producing conventions, events, and trade shows that will increase financial and environmental value. Upon completion, students should be able to demonstrate an understanding of management principles for multi-function, multi-day conferences and events.

Prerequisites: Take CUL 111 with a minimum grade of C

**HRM 220. Cost Control-Food and Beverage. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course introduces controls and accounting procedures as applied to costs in the hospitality industry. Topics include reports, cost control, planning and forecasting, control systems, financial statements, operational efficiencies, labor controls and scheduling. Upon completion, students should be able to demonstrate an understanding of food, beverage, and labor cost control systems for operational troubleshooting and problem solving.

Prerequisites: Take CUL 110 with a minimum grade of C  
Take MAT 110 MAT 121 MAT 122 MAT 143 MAT 152 MAT 171 MAT 172 MAT 223 MAT 263 MAT 271 MAT 272 MAT 273 MAT 280 or MAT 285 with a minimum grade of C

**HRM 225. Beverage Management. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course introduces the management of beverages served in hospitality operations. Topics include history and trends; service, procurement and storage; knowledge and control of wines and fermented/distilled beverages; and non-alcoholic beverages, coffees, and teas. Upon completion, students should be able to demonstrate an understanding of responsible alcohol service and the knowledge of beverages consumed in a hospitality operation.

Prerequisites: Take CUL 111 with a minimum grade of C

**HRM 230. Club & Resort Management. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course introduces specific principles of managing a hospitality operation in a resort or club setting. Topics include operational efficiencies, resort and club marketing, recreational and sport activity management, and retail management. Upon completion, students should be able to demonstrate an understanding of the specialized skills involved in resort and club management.

Prerequisites: Take CUL 111 with a minimum grade of C

**HRM 240. Marketing for Hospitality. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course covers planning, organizing, directing, and analyzing the results of marketing programs for the hospitality industry. Emphasis is placed on target marketing, marketing mix, analysis, product and image development, use of current media, sales planning, advertising, public relations, and collateral materials. Upon completion, students should be able to apply the marketing process as it relates to the hospitality industry.

Prerequisites: Take CUL 111 with a minimum grade of C

**HRM 245. Human Resource Management-Hospitality. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course introduces a systematic approach to human resource management in the hospitality industry. Topics include training/development, staffing, selection, hiring, recruitment, evaluation, benefit administration, employee relations, labor regulations/laws, discipline, motivation, productivity, shift management, contract employees and organizational culture. Upon completion, students should be able to apply human resource management skills for the hospitality industry.

Prerequisites: Take CUL 111 with a minimum grade of C

**HRM 275. Leadership-Hospitality. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course introduces leadership traits, styles, and the roles and responsibilities of successful hospitality leaders while developing the student's personal leadership skills. Topics include formal and informal hospitality leadership; defining effective and ineffective leadership behavior; and leadership organizational change and planning within the hospitality industry. Upon completion, students will be able to apply appropriate leadership actions in real-world situations ranging from local to global hospitality environments.

**HRM 280. Management Problems-Hospitality. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course is designed to introduce students to timely issues within the hospitality industry and is intended to move students into a managerial mindset. Emphasis is placed on problem-solving skills using currently available resources. Upon completion, students should be able to demonstrate knowledge of how hospitality management principles may be applied to real challenges facing industry managers.

Prerequisites: Take HRM 110 Minimum grade C

## Human Services (HSE)

**HSE 110. Introduction to Human Services. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0

This course introduces the human services field, including the history, agencies, roles, and careers. Topics include personal/professional characteristics, diverse populations, community resources, disciplines in the field, systems, ethical standards, and major theoretical and treatment approaches. Upon completion, students should be able to identify the knowledge, skills, and roles of the human services worker.

**HSE 112. Group Process I. 2.0 Credits.** Class-1.0. Clinical-0.0. Lab-2.0. Work-0.0

This course introduces interpersonal concepts and group dynamics. Emphasis is placed on self-awareness facilitated by experiential learning in small groups with analysis of personal experiences and the behavior of others. Upon completion, students should be able to show competence in identifying and explaining how people are influenced by their interactions in group settings.

**HSE 120. Interpersonal Relations. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course introduces the interpersonal and communication skills used in helping relationships and professions. Topics include self-understanding; growth techniques; assertive, passive, and aggressive behaviors; and effective communications in the helping role. Upon completion, students should be able to demonstrate skills for effective communications in helping relationships which promote understanding of self, other people, and personal growth.

**HSE 123. Interviewing Techniques. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0

This course covers the purpose, structure, focus, and techniques employed in effective interviewing. Emphasis is placed on observing, attending, listening, responding, recording, and summarizing of personal histories with instructor supervision. Upon completion, students should be able to perform the basic interviewing skills needed to function in the helping relationship.

**HSE 125. Counseling. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0

This course covers the major approaches to psychotherapy and counseling, including theory, characteristics, and techniques. Emphasis is placed on facilitation of self-exploration, problem solving, decision making, and personal growth. Upon completion, students should be able to understand various theories of counseling and demonstrate counseling techniques.

**HSE 210. Human Services Issues. 2.0 Credits.** Class-2.0. Clinical-0.0. Lab-0.0. Work-0.0

This course covers current issues and trends in the field of human services. Emphasis is placed on contemporary topics with relevance to special issues in a multi-faceted field. Upon completion, students should be able to integrate the knowledge, skills, and experiences gained in classroom and clinical experiences with emerging trends in the field.

**HSE 212. Group Process II. 2.0 Credits.** Class-1.0. Clinical-0.0. Lab-2.0. Work-0.0

This course is a continuation of the study of interpersonal concepts and group dynamics. Emphasis is placed on self-awareness facilitated by experiential learning in small groups with analysis of personal experiences and the behavior of others. Upon completion, students should be able to demonstrate their ability to communicate with others and facilitate communications between others.

Prerequisites: Take HSE 112

**HSE 220. Case Management. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0

This course covers the variety of tasks associated with professional case management. Topics include treatment planning, needs assessment, referral procedures, and follow-up and integration of services. Upon completion, students should be able to effectively manage the care of the whole person from initial contact through termination of services.

Prerequisites: Take HSE 110 Minimum grade C

**HSE 225. Crisis Intervention. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course introduces the basic theories and principles of crisis intervention. Emphasis is placed on identifying and demonstrating appropriate and differential techniques for intervening in various crisis situations. Upon completion, students should be able to assess crisis situations and respond appropriately.

**HSE 227. Children & Adolescents in Crisis. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course covers the crises affecting children and adolescents in contemporary society. Emphasis is placed on abuse and neglect, suicide and murder, dysfunctional family living, poverty, and violence. Upon completion, students should be able to identify and discuss intervention strategies and available services for the major contemporary crises affecting children and adolescents.

**HSE 242. Family Systems. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course introduces the concepts of family structure as a system and includes the impact of contemporary society on the family. Topics include systems theory, family structure, blended families, divorce, adoption, and the elderly. Upon completion, students should be able to demonstrate an understanding of families as a system and the impact of change on family structure.

Prerequisites: Take One: PSY 150 or SOC 210

## Humanities (HUM)

**HUM 115. Critical Thinking. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course introduces the use of critical thinking skills in the context of human conflict. Emphasis is placed on evaluating information, problem solving, approaching cross-cultural perspectives, and resolving controversies and dilemmas. Upon completion, students should be able to demonstrate orally and in writing the use of critical thinking skills in the analysis of appropriate texts. This course has been approved to satisfy the Comprehensive Articulation Agreement pre-Major and/or elective course requirement.

Prerequisites: Take DRE 098 or ENG 111 Minimum grade C

**HUM 120. Cultural Studies. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course introduces the distinctive features of a particular culture. Topics include art, history, music, literature, politics, philosophy, and religion. Upon completion, students should be able to appreciate the unique character of the study culture.

**HUM 130. Myth in Human Culture. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course provides an in-depth study of myths and legends. Topics include the varied sources of myths and their influence on the individual and society within diverse cultural contexts. Upon completion, students should be able to demonstrate a general familiarity with myths and a broad-based understanding of the influence of myths and legends on modern culture.

**HUM 160. Introduction to Film. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0

This course introduces the fundamental elements of film artistry and production. Topics include film styles, history, and production techniques, as well as the social values reflected in film art. Upon completion, students should be able to critically analyze the elements covered in relation to selected films. This course is a Writing Intensive Elective for UNCC.

Prerequisites: Take ENG 111 with a minimum grade of C

**HUM 211. Humanities I. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course introduces the humanities as a record in literature, music, art, history, religion, and philosophy of humankind's answers to the fundamental questions of existence. Emphasis is placed on the interconnectedness of various aspects of cultures from ancient through early modern times. Upon completion, students should be able to identify significant figures and cultural contributions of the periods studied. This course has been approved to satisfy figures and cultural contributions of the periods studied.

Prerequisites: Take DRE 098 or ENG 111 Minimum grade C



**HUM 212. Humanities II. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course introduces the humanities as a record in literature, music, art, history, religion, and philosophy of humankind's answers to the fundamental questions of existence. Emphasis is placed on the interconnectedness of various aspects of cultures from early modern times to the present. Upon completion, students should be able to identify significant figures and cultural contributions of the periods studied.

Prerequisites: Take DRE 098 or ENG 111 Minimum grade C

**HUM 220. Human Values and Meaning. 0.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course presents some major dimensions of human experience as reflected in art, music, literature, philosophy, and history. Topics include the search for identity, the quest for knowledge, the need for love, the individual and society, and the meaning of life. Upon completion, students should be able to recognize interdisciplinary connections and distinguish between open and closed questions and between narrative and scientific models of understanding.

Prerequisites: Take ENG 111 Minimum grade C

## Industrial Science (ISC)

**ISC 110. Workplace Safety. 1.0 Credit.** Class-1.0. Clinical-0.0. Lab-0.0. Work-0.0

This course introduces the basic concepts of workplace safety. Topics include fire, ladders, lifting, lock-out/tag-out, personal protective devices, and other workplace safety issues related to OSHA compliance. Upon completion, students should be able to demonstrate an understanding of the components of a safe workplace.

**ISC 112. Industrial Safety. 2.0 Credits.** Class-2.0. Clinical-0.0. Lab-0.0. Work-0.0

This course introduces the principles of industrial safety. Emphasis is placed on industrial safety and OSHA regulations. Upon completion, students should be able to demonstrate knowledge of a safe working environment and OSHA compliance.

**ISC 115. Construction Safety. 2.0 Credits.** Class-2.0. Clinical-0.0. Lab-0.0. Work-0.0

This course introduces the basic concepts of construction site safety. Topics include ladders, lifting, lock-out/tag-out, personal protective devices, scaffolds, and above/below ground work based on OSHA regulations. Upon completion, students should be able to demonstrate knowledge of applicable safety regulations and safely participate in construction projects.

**ISC 131. Quality Management. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course provides a study and analysis of the aspects and implications of quality management that lead to customer satisfaction through continuous quality improvement. Topics include Total Quality Management, ISO 9000, organizing for quality, supplier/vendor relationships, and the role of leadership in quality management. Upon completion, students should be able to demonstrate an understanding of quality management concepts and techniques.

**ISC 212. Metrology. 2.0 Credits.** Class-1.0. Clinical-0.0. Lab-2.0. Work-0.0

This course covers the principles and techniques of modern practical metrology and inspection methods. Topics include precision, accuracy, standards, and calibration. Upon completion, students should be able to perform various roles within a metrology system.

**ISC 220. Lean Manufacturing. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0

This course introduces students to the concept of lean manufacturing as a means of waste reduction. Topics include the examination of manufacturing operations and the incorporation of lean techniques to reduce waste, cost, time, and materials in manufacturing processes. Upon completion, students should be able to demonstrate an understanding of lean manufacturing systems and how they benefit the environment and business.

**ISC 292. Selected Topics in Manufacturing Engineering Technology. 2.0 Credits.** Class-1.0. Clinical-0.0. Lab-2.0. Work-0.0

## Information Systems (CIS)

**CIS 110. Introduction to Computers. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0

This course introduces computer concepts, including fundamental functions and operations of the computer. Topics include identification of hardware components, basic computer operations, security issues, and use of software applications. Upon completion, students should be able to demonstrate an understanding of the role and function of computers and use the computer to solve problems.

**CIS 111. Basic PC Literacy. 2.0 Credits.** Class-1.0. Clinical-0.0. Lab-2.0. Work-0.0

This course provides an overview of computer concepts. Emphasis is placed on the use of personal computers and software applications for personal and fundamental workplace use. Upon completion, students should be able to demonstrate basic personal computer skills.

**CIS 115. Introduction to Programming and Logic. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0

This course introduces computer programming and problem solving in a structured program logic environment. Topics include language syntax, data types, program organization, problem solving methods, algorithm design, and logic control structures. Upon completion, students should be able to use top-down algorithm design and implement algorithmic solutions in a programming language.

Prerequisites: Complete one of the following options: Take DMA 010, DMA 020, DMA 030, and DMA 040

Take MAT 121

Take MAT 171

**CIS 193. Selected Topics in Information Systems. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0

**CIS 196. Seminar in Information Systems. 1.0 Credit.** Class-1.0. Clinical-0.0. Lab-0.0. Work-0.0

## Information Systems Security (SEC)

**SEC 110. Security Concepts. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0

This course introduces the concepts and issues related to securing information systems and the development of policies to implement information security controls. Topics include the historical view of networking and security, security issues, trends, security resources, and the role of policy, people, and processes in information security. Upon completion, students should be able to identify information security risks, create an information security policy, and identify processes to implement and enforce policy.

**SEC 150. Secure Communications. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0

This course provides an overview of current technologies used to provide secure transport of information across networks. Topics include data integrity through encryption, Virtual Private Networks, SSL, SSH, and IPSec. Upon completion, students should be able to implement secure data transmission technologies.

**SEC 151. Introduction to Protocol Analysis. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0

This course introduces protocol analysis. Topics include protocol analysis tools, TCP/IP concepts, Internet protocols, network traffic analysis, monitoring network traffic, network security protocol analysis, and understanding data flow through protocol analysis. Upon completion, students should be able to perform simple protocol analysis to determine baseline network performance and identify anomalies.

Prerequisites: Take CTI 120 SEC 110 Minimum grade C

**SEC 160. Security Administration I. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0

This course provides an overview of security administration and fundamentals of designing security architectures. Topics include networking technologies, TCP/IP concepts, protocols, network traffic analysis, monitoring, and security best practices. Upon completion, students should be able to identify normal network traffic using network analysis tools and design basic security defenses.

**SEC 251. Advanced Protocol Analysis. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0

This course is designed to provide advanced understanding of protocol analysis. Topics include advanced network protocol security analysis, data parsing, monitoring scanning logs, and network intrusion identification. Upon completion, students should be able to apply best practices in protocol analysis and apply the results to IT security frameworks.

Prerequisites: Take SEC 151 Minimum grade C

**SEC 258. Security Compliance. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0

This course introduces information security compliance and standards along with how they apply to corporate IT environments. Topics include ISO standards, government NIST frameworks, federal and state compliance requirements, security policies, incident response and business continuity planning. Upon completion, students should be able to apply compliance and availability requirements to corporate data enterprise scenarios.

Prerequisites: Take SEC 110 Minimum grade C

**SEC 285. Systems Security Project. 3.0 Credits.** Class-1.0. Clinical-0.0. Lab-4.0. Work-0.0

This course provides the student the opportunity to apply the skills and competencies acquired in the program that focus on systems security. Emphasis is placed on security policy, process planning, procedure definition, business continuity, compliance, auditing, testing procedures and systems security architecture. Upon completion, students should be able to design and implement comprehensive information security architecture from the planning and design phase through implementation.

Prerequisites: Take All: CTI 110, CTI 120, and CTS 115

## International Business (INT)

**INT 110. International Business. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course provides an overview of the environment, concepts, and basic differences involved in international business. Topics include forms of foreign involvement, international trade theory, governmental influences on trade and strategies, international organizations, multinational corporations, personnel management, and international marketing. Upon completion, students should be able to describe the foundation of international business.

Prerequisites: Complete one of the following options: Take DRE 098

Take EFL 111 EFL 112 with a minimum grade of C

Take ENG 111 with a minimum grade of C

Take ENG 112 with a minimum grade of C

Take ENG 113 with a minimum grade of C

Take ENG 114 with a minimum grade of C

**INT 115. Global Communication. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course introduces principles and techniques basic to intercultural business communications. Topics include selected cultural values and customs, verbal and non-verbal communication skills, and global etiquette. Upon completion students should be able to demonstrate beginning skills in effective verbal and non-verbal intercultural communications.

**INT 180. Travel Study Abroad. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course is designed to apply language and theoretical skills in an appropriate international business setting in a foreign country. Emphasis is placed on strengthening foreign language skills, performing with greater competence and confidence in the international workplace, and completing objectives outlined in training plan. Upon completion, students should be able to understand and utilize cultural patterns and business practices in the region of study.

**INT 210. International Trade. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course covers international business trade practices and foreign market research. Emphasis is placed on current trends of US trade practices in foreign countries and how to engage in international trade and acquire foreign marketing information. Upon completion, students should be able to formulate an overall product policy for the international marketplace.

Prerequisites: Take INT 110

**INT 220. International Economics. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course introduces the forces and criteria for the development of a new international economic order. Emphasis is placed on balance of payments, foreign exchange rates and their determination, International Monetary System, and arguments for and against free trade and protectionism. Upon completion, students should be able to describe economic principles and concepts of international trade.

Prerequisites: Take INT 110

Take ECO 151, ECO 251 or ECO 252

**INT 230. International Law. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course is designed to develop an understanding of the different theories on international law and their effect on international trade. Emphasis is placed on concepts of contracts, international transactions, major organizations in international trade, establishment of treaties, economic areas, and US laws affecting international trade. Upon completion, students should be able to apply theories and concepts to international trade and transactions. This course is designed to develop an understanding of the different theories on international law and their effect on international trade. Emphasis is placed on concepts of contracts, international transactions, major organizations in international trade, establishment of treaties, economic areas, and US laws affecting international trade. Upon completion, students should be able to apply theories and concepts to international trade and transactions. This course is a unique concentration requirement of the international business concentration in the business Administration Program.

Prerequisites: Take BUS 110 BUS 115 INT 110

## Interpreter Preparation (IPP)

**IPP 111. Introduction to Interpretation. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course provides an orientation to the field of interpreting, interpretation models, cognitive processes associated with interpretation, professional ethical standards, employment opportunities, and working conditions. Topics include specialized jargon, code of ethics, theories, interpreter assessments/qualifications, and protocol associated with various settings. Upon completion, students should be able to explain the rationale for placement of interpreters and apply ethical standards to a variety of working situations.

Prerequisites: Take DRE 098 or ENG 111 with a minimum grade of C

**IPP 112. Comparative Cultures. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course introduces various cultural attributes and how they impact the consumers and the interpreting process. Topics include value systems of deaf and non-deaf individuals, enculturation stages, sociolinguistic continuum of language use within the deaf community, and cross-cultural management. Upon completion, students should be able to compare deaf and non-deaf cultures and discuss how attitudes impact communication interactions and interpreting.

Prerequisites: Take ASL 212 with a minimum grade of C

**IPP 130. Analytical Skills for Interpreting. 3.0 Credits.** Class-1.0. Clinical-0.0. Lab-4.0. Work-0.0

This course is designed to improve cognitive processes associated with interpreting, listening, short-term memory, semantic equivalence, visual/auditory processing, thought organization, and logic. Emphasis is placed on developing skills necessary to generate equivalent messages between ASL and English. Upon completion, students should be able to consecutively interpret non-technical, interactive messages between ASL and English.

Prerequisites: Take ASL 211 Minimum grade C

**IPP 152. ASL/English Translation. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course provides a study of the component parts of a cultural scheme and the manner in which ASL and English differ. Emphasis is placed on analyzing, discussing, and translating basic ASL and English texts. Upon completion, students should be able to discuss and apply techniques of cross-cultural communication and translation between deaf and non-deaf communities.

Prerequisites: Take ASL 112 ASL 212 Minimum grade C

**IPP 153. Introduction to Discourse Analysis. 3.0 Credits.** Class-1.0. Clinical-0.0. Lab-4.0. Work-0.0

This course introduces discourse types and functions and specialized vocabulary and examines the specific nature of ASL discourse. Emphasis is placed on applying and practicing a model of analysis utilizing specialized vocabulary. Upon completion, students should be able to utilize specialized vocabulary and demonstrate ASL discourse features.

Prerequisites: Take ASL 212 IPP 111 Minimum grade C Passing ASLPI score

**IPP 161. Consecutive Interpreting. 5.0 Credits.** Class-2.0. Clinical-0.0. Lab-6.0. Work-0.0

This course introduces the process of ASL/English consecutive interpreting in a variety of interview, meeting, and small conference settings. Emphasis is placed on generating equivalent messages between ASL and English. Upon completion, students should be able to discuss and apply the principles of the protocol of consecutive interpreting.

Prerequisites: Take IPP 152 IPP 153 Minimum grade C

**IPP 221. Simultaneous Interpreting I. 5.0 Credits.** Class-2.0. Clinical-0.0. Lab-6.0. Work-0.0

This course introduces simultaneous ASL/English interpreting through a variety of expository texts originating in group, meeting, and conference settings. Emphasis is placed on analyzing expository texts, identifying registers, and applying principles of the protocol of interpreting. Upon completion, students should be able to apply the appropriate linguistic and/or cultural adjustments required to generate equivalent messages.

Prerequisites: Take IPP 161 Minimum grade C

Corequisites: Take IPP 240

**IPP 222. Simultaneous Interpreting II. 5.0 Credits.** Class-2.0. Clinical-0.0. Lab-6.0. Work-0.0

This course provides additional experience in interpreting a variety of situations which occur during basic expository presentations. Emphasis is placed on interpreting texts which serve an informational, hortatory, and/or procedural function. Upon completion, students should be able to apply the appropriate linguistic and cultural adjustments necessary to achieve an equivalent register in the interpretation.

Prerequisites: Take IPP 221 IPP 240 Minimum grade C

**IPP 224. ASL to English Interpretation. 0.0 Credits.** Class-1.0. Clinical-0.0. Lab-0.0. Work-0.0

This course is designed to improve skills in ASL to English interpretation. Emphasis is placed on receptive skills, equivalent messages, grammatically correct English, and appropriate content, mood, and register. Upon completion, students should be able to generate appropriate English equivalents and apply appropriate linguistic and/or cultural adjustments.

Prerequisites: Take IPP 152

**IPP 240. Ethical Standards and Practices. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course develops intellectual and ethical decision-making abilities and considers common ethical dilemmas that arise within the interpreting process. Topics include a model of ethical/intellectual development and the application of the model to interpreting practices. Upon completion, students should be able to discuss ethical resolution to various case studies and apply recognized principles of professional behavior to the interpreting process.

Corequisites: Take IPP 221

**IPP 245. Educational Interpreting Issues. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course provides an overview of educational interpreting in the US and discusses recent trends in the education of deaf students. Topics include history of deaf education, current employment practices and requirements for educational interpreters. Upon completion, students should be able to discuss current issues, become familiar with evaluation practices, and apply professional/ethical standards to the interpreting role.

Prerequisites: Take ASL 212 IPP 111 Minimum grade C

## Journalism (JOU)

**JOU 110. Introduction to Journalism. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course presents a study of journalistic news, feature, and sports writing. Emphasis is placed on basic news writing techniques and on related legal and ethical issues. Upon completion, students should be able to gather, write, and edit news, feature, and sports articles. This course is a Writing Intensive elective for UNCC.

Prerequisites: Take ENG 111 with a minimum grade of C

**JOU 216. Writing for Mass Media. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0

This course is an introduction to news writing for newspapers and other print media including the techniques of news gathering, reporting, and interviewing. Emphasis is placed on basic methods of gathering information, conducting interviews, organizing a story, writing leads, writing clear, concise copy, and upon developing research skills. Upon completion, students should be able to write clear, concise, accurate, complete, balanced and readable news stories according to guidelines set by industry standards.

Prerequisites: Take DRE 098 or ENG 111 with a minimum grade of C

**JOU 217. Feature/Editorial Writing. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0

This course covers the basics of persuasive writing for community newspapers and other print media. Emphasis is placed on writing features, reviews, and editorials including audience analysis, appropriate language, effective supporting details, completeness, and accuracy. Upon completion, students should be able to write effective feature stories, reviews, and editorials.

Prerequisites: Take JOU 110

Take DRE 098 or ENG 111 with a minimum grade of C

## Landscape Architecture Technology (LAR)

**LAR 111. Introduction to Landscape Architecture Technology. 3.0 Credits.** Class-1.0. Clinical-0.0. Lab-6.0. Work-0.0

This course introduces basic architectural drafting techniques, lettering, and use of architectural and engineering scales. Topics include creating landscape architectural plans, sections and details; reprographic techniques; and other related topics. Upon completion, students should be able to prepare and print scaled drawings within minimum landscape architectural standards.

**LAR 113. Residential Landscape Design. 3.0 Credits.** Class-1.0. Clinical-0.0. Lab-6.0. Work-0.0

The course covers the creation of residential landscape design working drawings. Topics include residential plans, elevation, sections, plant selection/lists, and other related topics. Upon completion, students should be able to prepare a set of residential landscape working drawings which are within accepted architectural standards.

Prerequisites: Take LAR 111

**LAR 120. Sustainable Development. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0

This course introduces students to sustainable practices in site design and land development. Topics include conservation subdivision design, transportation issues, urban planning, water conservation, rain gardens, alternative technologies, permaculture design, low impact design, and grey water systems. Upon completion, students should be able to demonstrate techniques and procedures used for mitigating the impact of development on the environment.

## Legal Education (LEX)

**LEX 110. Intro to Paralegal Study. 2.0 Credits.** Class-2.0. Clinical-0.0. Lab-0.0. Work-0.0

This course introduces the paralegal profession and the legal system, and an emphasis is placed on the role of professional and legal ethics. Topics include regulations, ethics, case analysis, legal reasoning, career opportunities, professional organizations, terminology and other related topics. Upon completion, students should be able to explain the role of a paralegal and identify the skills, knowledge, and ethics required of paralegals.

Prerequisites: Take ENG 111 with a minimum grade of C

**LEX 120. Legal Research/Writing I. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0

This course introduces the techniques of legal research and writing. Emphasis is placed on locating, analyzing, applying, and updating sources of law; effective legal writing, including proper citation; and the use of electronic research methods. Upon completion, students should be able to perform legal research and writing assignments using techniques covered in the course.

Prerequisites: Take ENG 111 with a minimum grade of C

**LEX 121. Legal Research/Writing II. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0

This course covers advanced topics in legal research and writing. Topics include more complex legal issues and assignments involving preparation of legal memos, briefs, and other documents and the advanced use of electronic research methods. Upon completion, students should be able to perform legal research and writing assignments using techniques covered in the course.

Prerequisites: Take ENG 111 and LEX 120 with a minimum grade of C



**LEX 130. Civil Injuries. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course covers traditional tort concepts and the evolving body of individual rights created by statute. Topics include intentional and non-intentional torts with emphasis on negligence, strict liability, civil rights, workplace and environmental liability, remedies, and damages. Upon completion, students should be able to recognize, explain, and evaluate elements of civil injuries and related defenses.

Prerequisites: Take ENG 111 with a minimum grade of C

**LEX 140. Civil Litigation I. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course introduces the structure of the legal system and the rules governing civil litigation. Topics include jurisdiction state and federal rules of civil procedure and evidence. Upon completion, students should be able to assist an attorney in pre-litigation matters and preparation of pleadings and motions.

Prerequisites: Take ENG 111 with a minimum grade of C

**LEX 141. Civil Litigation II. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0

This course covers advanced topics in the civil litigation process. Topics include motions, discovery, and trial and appellate procedures. Upon completion, students should be able to assist an attorney in preparing and organizing documents for trial, settlement and post-trial practice.

Prerequisites: Take ENG 111 and LEX 140 with a minimum grade of C

**LEX 150. Commercial Law I. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0

This course covers legally enforceable agreements, forms of organization, and selected portions of the Uniform Commercial Code. Topics include drafting and enforcement of contracts, leases, and related documents and selection and implementation of business organization forms, sales, and commercial papers. Upon completion, students should be able to apply the elements of a contract, prepare various business documents, and understand the role of commercial paper.

Prerequisites: Take ENG 111 with a minimum grade of C

**LEX 151. Commercial Law II. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course is a continuation of LEX 150 and covers advanced topics in Business and Commercial Law. Topics include agency and employment, insurance, computer law, intellectual property, personal property and bailment, corporate organizations and bankruptcy. Upon completion, students will understand and be able to apply legal principles governing these topics and be able to draft a variety of financial instruments.

Prerequisites: Take LEX 150

**LEX 160. Criminal Law & Procedure. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0

This course introduces substantive criminal law and procedural rights of the accused. Topics include elements of state/federal crimes, defenses, constitutional issues, pre-trial and trial process, and other related topics. Upon completion, students should be able to explain elements of specific crimes and assist an attorney in preparing a criminal case.

Prerequisites: Take ENG 111 with a minimum grade of C

**LEX 170. Administrative Law. 2.0 Credits.** Class-2.0. Clinical-0.0. Lab-0.0. Work-0.0

This course covers the scope, authority, and regulatory operations of various federal, state, and local administrative agencies. Topics include social security, worker's compensation, unemployment, zoning, and other related topics. Upon completion, students should be able to research sources of administrative law, investigate, and assist in representation of clients before administrative agencies.

Prerequisites: Take ENG 111 with a minimum grade of C

**LEX 180. Case Analysis & Reasoning. 2.0 Credits.** Class-1.0. Clinical-0.0. Lab-2.0. Work-0.0

This course covers the techniques of reading and applying legal opinions and the skills of case analysis. Emphasis is placed on the components of opinions and on types of legal writing. Upon completion, students should be able to read, analyze, and brief opinions and prepare legal memoranda, briefs, and other legal documents.

Prerequisites: Take ENG 111 with a minimum grade of C

Corequisites: Take LEX 120

**LEX 210. Real Property I. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course introduces the study of real property law. Topics include the distinction between real and personal property, various estates, mechanics of conveyance and encumbrance, recordation, special proceedings, and other related topics. Upon completion, students should be able to identify estates, forms of deeds, requirements for recording, and procedures to enforce rights to real property.

Prerequisites: Take ENG 111 with a minimum grade of C

**LEX 211. Real Property II. 3.0 Credits.** Class-1.0. Clinical-0.0. Lab-4.0. Work-0.0

This course continues the study of real property law relating to title examination and preparation of closing documents. Topics include use of courthouse and other public records in title examination and preparation of documents required in real estate transactions and closings. Upon completion, students should be able to plot/draft a description, perform complete title examination, draft closing documents including title insurance forms, and prepare disbursement reconciliation. Labs will take place at the local Register of Deeds office.

Prerequisites: Take LEX 210 with a minimum grade of C

**LEX 220. Corporate Law. 2.0 Credits.** Class-2.0. Clinical-0.0. Lab-0.0. Work-0.0

This course covers the legal aspects of forming, operating, and maintaining a business. Emphasis is placed on the business corporation with additional coverage of sole proprietorships and partnerships. Upon completion, students should be able to draft basic partnership and corporate documents and file these documents as required.

Prerequisites: Take ENG 111 with a minimum grade of C

**LEX 240. Family Law. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course covers laws governing domestic relations. Topics include marriage, separation, divorce, child custody, support, property division, adoption, domestic violence, and other related topics. Upon completion, students should be able to interview clients, gather information, and draft documents related to family law.

Prerequisites: Take ENG 111 with a minimum grade of C

**LEX 250. Wills, Estates, & Trusts. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0

This course covers various types of wills, trusts, probate, estate administration, and intestacy. Topics include types of wills and execution requirements, caveats and dissents, intestate succession, inventories and accountings, distribution and settlement, and other related topics. Upon completion, students should be able to draft simple wills, prepare estate forms, understand administration of estates including taxation, and explain terms regarding trusts.

Prerequisites: Take ENG 111 with a minimum grade of C

**LEX 260. Bankruptcy and Collections. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course provides an overview of the laws of bankruptcy and the rights of creditors and debtors. Topics include bankruptcy procedures and estate management, attachment, claim and delivery, repossession, foreclosure, collection, garnishment, and post-judgment collection procedure. Upon completion, students should be able to prepare and file bankruptcy forms, collection letters, statutory liens, and collection of judgments.

Prerequisites: Take ENG 111 with a minimum grade of C

**LEX 270. Law Office Management/Technology. 2.0 Credits.** Class-1.0. Clinical-0.0. Lab-2.0. Work-0.0

This course provides an overview of law office management and organization. Topics include office forms, filing systems, billing/time keeping, computer systems, calendar systems, library administration, case management, office/personnel procedures, ethics, and technology. Upon completion, students should be able to establish and maintain various law office systems, monitor case progress, and supervise non-lawyer personnel.

**LEX 271. Law Office Writing. 2.0 Credits.** Class-1.0. Clinical-0.0. Lab-2.0. Work-0.0

This course covers the basics of writing for the law office including the drafting of general correspondence, the briefing of cases, and the preparation of settlement brochures. Emphasis is placed on legal vocabulary in the context of letter writing, briefing judicial opinions, and the preparation of the settlement brochure. Upon completion, students should be able to draft letters to clients, opposing counsel, government entities, and insurance companies and prepare the settlement brochure. This course will place emphasis on legal editing, proofreading and the proper use of grammar.

Prerequisites: Take LEX 120 with a minimum grade of C

**LEX 273. North Carolina Certified Paralegal Review Course. 2.0 Credits.** Class-2.0. Clinical-0.0. Lab-0.0. Work-0.0

This course provides an overview of the topics assessed on the North Carolina Certified Paralegal (NCCP) Exam. Topics include Wills, Trusts, and Estates; Family Law; Civil Litigation; Real Property; Commercial Law; Ethics; legal research, grammar and writing. Upon completion, students should be prepared to sit for the NCCP exam.

Prerequisites: Take All: LEX 121 and LEX 141

**LEX 280. Ethics & Professionalism. 2.0 Credits.** Class-2.0. Clinical-0.0. Lab-0.0. Work-0.0

This course reinforces legal ethics and the role of the paralegal in a professional work environment. Topics include a review of ethics, employment opportunities, and search techniques; paralegal certification and other related topics. Upon completion, students should be able to understand the paralegal's role in the ethical practice of law.

Prerequisites: Take ENG 111 with a minimum grade of C

**LEX 281. Intellectual Property. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0

This course covers the basics of intellectual property theory, and the paralegal's practical role. Topics include copyright, patent and trademark theory which emphasizes statutory creation and property rights. Upon completion, students should be able to discuss the creation and sustainability of copyrights, patents and trademarks.

Prerequisites: Take LEX 110, LEX 120, and LEX 140

Take ENG 111 with a minimum grade of C

**LEX 282. Immigration Law. 2.0 Credits.** Class-2.0. Clinical-0.0. Lab-0.0. Work-0.0

This course covers both theoretical and practical application of immigration law to everyday scenarios and the paralegal's role in the process.

Topics include administrative agency formation, the role of INS and the implication of the decisions on the immigration process. Upon completion, students should be able to discuss administrative agencies, the relationship of the INS to the governmental structure and immigration case law.

Prerequisites: Take LEX 110, LEX 120, and LEX 140

Take ENG 111 with a minimum grade of C

**LEX 283. Investigation. 2.0 Credits.** Class-1.0. Clinical-0.0. Lab-2.0. Work-0.0

This course covers various aspects of civil and criminal investigation. Topics include locating witnesses, interviewing techniques, obtaining records, sketching and photographing accident scenes, collecting and preserving evidence, and preparation of exhibits for trial. Upon completion, students should be able to locate witnesses, prepare questionnaires, interview witnesses, obtain criminal/motor vehicle/medical/ accident records, sketch scenes, and prepare exhibits.

Prerequisites: Take LEX 110, LEX 120, LEX 140, and ENG 111 with a minimum grade of C

**LEX 285. Workers' Compensation Law. 2.0 Credits.** Class-2.0. Clinical-0.0. Lab-0.0. Work-0.0

This course covers the process of initiating and handling workers' compensation claims. Emphasis is placed on reviewing and drafting relevant Industrial Commission forms. Upon completion, students should be able to interview clients, gather information, and draft documents related to workers' compensation claims.

Prerequisites: Take ENG 111 with a minimum grade of C

**LEX 289. U.S. Constitutional Law. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0

This course covers the creation, content, and interpretation of the Constitution of the United States and its amendments as it relates to civil law and practice. Topics include constitutional formation, structure, court interpretation and the implication of legal decision for legal practitioners. Upon completion, students should be able to discuss the formation of the Constitution, its interpretation and application to the practice of civil law.

Prerequisites: Take LEX 110, LEX 120, and LEX 140 with a minimum grade of C

## Logistics Management (LOG)

**LOG 110. Introduction to Logistics. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course provides an overview of logistics. Topics include traffic management, warehousing, inventory control, material handling, global logistics, and the movement and storage of goods from raw materials sources to end consumers. Upon completion, students should be able to identify the different segments of logistics and use the terminology of the industry.

Prerequisites: Complete one of the following options: Take DRE 098  
Take EFL 111 EFL 112  
Take ENG 111

**LOG 120. Global Logistics. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course examines logistics operations, processes, and modes of transportation in an interdependent world economy. Emphasis is placed on freight forwarding operations, analyzing and selecting transportation modes, and processing of import/export documentation. Upon completion, students should be able to arrange and coordinate the transportation of products globally.

Prerequisites: Take LOG 110

**LOG 125. Transportation Logistics. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course covers the role and importance of the transportation industry. This is an overview of transportation emphasizing its environmental and sociological aspects, economic impact, services, regulatory guidelines, policies, and its future. Upon completion, students should be able to identify modes of transportation, interpret governing regulations, and describe the principles and terminology used in the transportation industry.

Prerequisites: Complete one of the following options: Take DRE 098  
Take EFL 111 EFL 112  
Take ENG 111

**LOG 210. Fleet Management. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course covers the management of transportation, fleet operations, and safety. Emphasis is placed on DOT safety regulations in the hiring, training, and supervision of drivers in transportation. Upon completion, students should be able to write a safety program for drivers involved in interstate commerce following DOT regulations.

Prerequisites: Take LOG 110

**LOG 211. Distribution Management. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0

This course covers the functions, techniques, and tools utilized in warehousing and distribution centers and their role in business and logistics. Emphasis is placed on warehouse and distribution center management, operations, productivity, software systems, picking, automation, cross docking, safety, security, material handling, benchmarking, and cost. Upon completion, students should be able to describe the role of warehouses and distribution centers, apply industry principles and terminology, and understand distribution productivity measures.

Prerequisites: Take LOG 110

**LOG 215. Supply Chain Management. 3.0 Credits.** Class-3.0.

Clinical-0.0. Lab-0.0. Work-0.0

This course covers all activities involved in the flow of products and information between the suppliers, customers, producers, and service providers. Topics include acquiring, purchasing, manufacturing, assembling, and distributing goods and services throughout the supply chain organizations. Upon completion, students should be able to identify the supply chain units and describe the materials management processes.

Prerequisites: Take LOG 110

**LOG 220. Logistics Management. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course covers the management of the movement and storage of goods and analysis of total costs involved. Emphasis is placed on the monitoring of inventory using automated systems, managing the storage function, warehousing, and distribution. Upon completion, students should be able to describe warehousing and facility layouts, identify material handling methods, and apply inventory control procedures. LOG 220 is a unique concentration requirement of the logistics management concentration in the business administration program.

Prerequisites: Take LOG 110

**LOG 230. Transportation Management. 3.0 Credits.** Class-3.0.

Clinical-0.0. Lab-0.0. Work-0.0

This course covers the function of shippers and carriers in the transportation industry. Emphasis is placed on negotiating price and service requirements in the movement of goods, identifying areas of carrier liability, and the methods for processing claims. Upon completion, students should be able to compare common carriers and company operated transportation for service and cost, interpret pricing structures, and determine carrier liability. LOG 230 is a requirement of the Logistics Management concentration in the Business Administration program.

Prerequisites: Take LOG 110

**LOG 235. Import/Export Management. 3.0 Credits.** Class-3.0.

Clinical-0.0. Lab-0.0. Work-0.0

This course introduces the elements of import and export operations, from transportation to documentation, finance, and security and the effects on the global supply chain. Emphasis is placed on existing import/export regulations, customs documentation, intermodal transportation, foreign freight forwarders, global technology, and homeland security initiatives. Upon completion, students should be able to perform import/export operations, channels of distribution, implemented technologies, and associate with operating a secure supply chain.

Prerequisites: Take LOG 125

**LOG 240. Purchasing Logistics. 3.0 Credits.** Class-3.0. Clinical-0.0.

Lab-0.0. Work-0.0

This course introduces the various aspects of purchasing, and their impact on materials management, supply chain, transportation, and global logistics processes. Emphasis is placed on the different methods of electronic sourcing, negotiating and pricing principles, and on the internal and external considerations associated with international logistics. Upon completion, students should be able to describe and apply the principles and terminology used in procurement including electronic data interchange services, purchasing and logistics systems.

Prerequisites: Take LOG 110

**LOG 250. Advanced Global Logistics. 4.0 Credits.** Class-3.0. Clinical-0.0. Lab-2.0. Work-0.0

This course covers the advanced application of global operations and logistics strategies, planning, technology, risk, and management necessary to cope with the global business environment. Emphasis is placed on an in-depth understanding of global sourcing, shipping, tracking, and e-logistics systems necessary to operate inbound/outbound logistics in a global market. Upon completion, students should be able to identify the different global markets and logistics technology available to process international inbound/outbound logistics transactions.

Prerequisites: Take LOG 125

## Low Impact Development (LID)

**LID 111. Low Impact Development Design Principles. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0

This course introduces design principles of Low Impact Development (LID) which incorporate sustainable development and natural resources management as an alternative to traditional site design. Topics include science-based interdisciplinary design practices including tools from civil and environmental engineering, hydrology, horticulture, ecology, and architecture. Upon completion, students should be able to use multifaceted approaches to recommend site-specific LID design concepts for residential, public, and commercial sites.

## Machining (MAC)

**MAC 111AB. Machining Technology I. 3.0 Credits.** Class-1.0. Clinical-0.0. Lab-6.0. Work-0.0

This course introduces machining operations as they relate to the metalworking industry. Topics include machine shop safety, measuring tools, lathes, drilling machines, saws, milling machines, bench grinders, and layout instruments. Upon completion, students should be able to safely perform the basic operations of measuring, layout, drilling, sawing, turning, and milling. This course emphasizes engine lathe setup and operation.

**MAC 111BB. Machining Technology I. 3.0 Credits.** Class-1.0. Clinical-0.0. Lab-6.0. Work-0.0

This course introduces machining operations as they relate to the metalworking industry. Topics include machine shop safety, measuring tools, lathes, drilling machines, saws, milling machines, bench grinders, and layout instruments. Upon completion, students should be able to safely perform the basic operations of measuring, layout, drilling, sawing, turning, and milling. This is the second part of a course sequence and emphasizes milling machine setup and operation.

**MAC 111. Machining Technology I. 6.0 Credits.** Class-2.0. Clinical-0.0. Lab-12.0. Work-0.0

This course introduces machining operations as they relate to the metalworking industry. Topics include machine shop safety, measuring tools, lathes, drilling machines, saws, milling machines, bench grinders, and layout instruments. Upon completion, students should be able to safely perform the basic operations of measuring, layout, drilling, sawing, turning, and milling. This course emphasizes milling machine setup and operation.

**MAC 114. Introduction to Metrology. 2.0 Credits.** Class-2.0. Clinical-0.0. Lab-0.0. Work-0.0

This course introduces the care and use of precision measuring instruments. Emphasis is placed on the inspection of machine parts and use of a wide variety of measuring instruments. Upon completion, students should be able to demonstrate the correct use of measuring instruments.

**MAC 121. Introduction to CNC. 2.0 Credits.** Class-2.0. Clinical-0.0. Lab-0.0. Work-0.0

This course introduces the concepts and capabilities of computer numerical control machine tools. Topics include setup, operation, and basic applications. Upon completion, students should be able to explain operator safety, machine protection, data input, program preparation, and program storage.

**MAC 122. CNC Turning. 2.0 Credits.** Class-1.0. Clinical-0.0. Lab-3.0. Work-0.0

This course introduces the programming, setup, and operation of CNC turning centers. Topics include programming formats, control functions, program editing, part production, and inspection. Upon completion, students should be able to manufacture simple parts using CNC turning centers.

Prerequisites: Take MAC 121

**MAC 124. CNC Milling. 2.0 Credits.** Class-1.0. Clinical-0.0. Lab-3.0. Work-0.0

This course introduces the manual programming, setup, and operation of CNC machining centers. Topics include programming formats, control functions, program editing, part production, and inspection. Upon completion, students should be able to manufacture simple parts using CNC machining centers.

Prerequisites: Take MAC 121

**MAC 131. Blueprint Reading-Machining I. 2.0 Credits.** Class-1.0. Clinical-0.0. Lab-2.0. Work-0.0

This course covers the basic principles of blueprint reading and sketching. Topics include multi-view drawings; interpretation of conventional lines; and dimensions, notes, and thread notations. Upon completion, students should be able to interpret basic drawings, visualize parts, and make pictorial sketches.

**MAC 132. Blueprint Reading-Machining II. 2.0 Credits.** Class-1.0. Clinical-0.0. Lab-2.0. Work-0.0

This course introduces more complex industrial blueprints. Emphasis is placed on auxiliary views, section views, violations of true project, special views, applications of GD & T, and interpretation of complex parts. Upon completion, students should be able to read and interpret complex industrial blueprints.

Prerequisites: Take MAC 131 with a minimum grade of C

**MAC 142. Machining Applications II. 4.0 Credits.** Class-2.0. Clinical-0.0. Lab-6.0. Work-0.0

This course provides instruction in the wide variety of processes associated with machining. Topics include safety, equipment set-up, holding fixtures, tooling, cutting speeds and depths, metal properties, and proper finishes. Upon completion, students should be able to safely demonstrate advanced machining operations, accurately measure components, and produce accurate components with a proper finish. Prerequisites: Complete one of the following options: Take MAC 111AB, MAC 111BB, and MAC 114 with a minimum grade of C. Take MAC 111AB, MAC 111BB, and ISC 212 with a minimum grade of C.

**MAC 143. Machining Applications III. 4.0 Credits.** Class-2.0. Clinical-0.0. Lab-6.0. Work-0.0

This course provides instruction in the field of advanced machining. Emphasis is placed on creating complex components, close-tolerance machining, precise measurement, and proper equipment usage. Upon completion, students should be able to demonstrate the ability to produce an accurately machined component with a quality finish using the proper machining process.

Prerequisites: Take MAC 122, MAC 124, and MAC 142 Minimum grade C



**MAC 151. Machining Calculations. 2.0 Credits.** Class-1.0. Clinical-0.0. Lab-2.0. Work-0.0

This course introduces basic calculations as they relate to machining occupations. Emphasis is placed on basic calculations and their applications in the machine shop. Upon completion, students should be able to perform basic shop calculations.

**MAC 152. Advanced Machining Calculations. 2.0 Credits.** Class-1.0. Clinical-0.0. Lab-2.0. Work-0.0

This course combines mathematical functions with practical machine shop applications and problems. Emphasis is placed on gear ratios, lead screws, indexing problems, and their applications in the machine shop. Upon completion, students should be able to calculate solutions to machining problems.

Prerequisites: Take MAT 110 or MAT 121

**MAC 192. Selected Topics in Machining. 2.0 Credits.** Class-2.0. Clinical-0.0. Lab-6.0. Work-0.0

This course provides an opportunity to explore areas of current interest in the specific program or discipline areas. Emphasis is placed on subject matter appropriate to the program or discipline. Upon completion, students should be able to demonstrate an understanding of the specific area of study.

**MAC 222. Advanced CNC Turning. 2.0 Credits.** Class-1.0. Clinical-0.0. Lab-3.0. Work-0.0

This course covers advanced methods in setup and operation of CNC turning centers. Emphasis is placed on programming and production of complex parts. Upon completion, students should be able to demonstrate skills in programming, operations, and setup of CNC turning centers. This course covers advanced methods in setup and operation of CNC turning centers. Emphasis is placed on programming and production of complex parts. Upon completion, students should be able to demonstrate skills in programming, operations, and setup of CNC turning centers.

Prerequisites: Take MAC 122

**MAC 224. Advanced CNC Milling. 2.0 Credits.** Class-1.0. Clinical-0.0. Lab-3.0. Work-0.0

This course covers advanced methods in setup and operation of CNC machining centers. Emphasis is placed on programming and production of complex parts. Upon completion, students should be able to demonstrate skills in programming, operations, and setup of CNC machining centers.

Prerequisites: Take MAC 124

**MAC 228. Advanced CNC Processes. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0

This course covers advanced programming, setup, and operation of CNC turning centers and CNC milling centers. Topics include advanced programming formats, control functions, program editing, and part production and inspection. Upon completion, students should be able to manufacture complex parts using CNC turning and milling centers.

Prerequisites: Take MAC 232

**MAC 231. Cam: Computer Numerical Control Turning. 3.0 Credits.** Class-1.0. Clinical-0.0. Lab-4.0. Work-0.0

This course introduces Computer Numerical Control graphics programming and concepts for turning center applications. Emphasis is placed on the interaction of menus to develop a shape file in a graphics CAM system and to develop tool path geometry and part geometry. Upon completion, students should be able to develop a job plan using CAM software, including machine selection, tool selection, operational sequence, speed, feed, and cutting depth. Students will write transfer machine code from CAM graphics to the CNC turning center.

Prerequisites: Take MAC 122

**MAC 232. CAM: Computer Numerical Control Milling. 3.0 Credits.** Class-1.0. Clinical-0.0. Lab-4.0. Work-0.0

This course introduces Computer Numerical Control graphics programming and concepts for machining center applications. Emphasis is placed on developing a shape file in a graphics CAM system and transferring coded information from CAM graphics to the CNC milling center. Upon completion, students should be able to develop a complete job plan using CAM software to create a multi-axis CNC program.

Prerequisites: Take MAC 124

**MAC 234. Advanced Multi-Axis Machining. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0

This course includes multi-axis machining using machining centers with multi-axis capabilities. Emphasis is placed on generation of machining center input with a CAM system and setup of pallet changer and rotary system for multi-axis machining fixtures. Upon completion, students should be able to convert CAD to output for multi-axis machining centers, including tooling, setup, and debugging processes.

Prerequisites: Take MAC 232 Minimum grade C

**MAC 292. Selected Topics in Machining. 2.0 Credits.** Class-2.0. Clinical-0.0. Lab-6.0. Work-0.0

This course provides an opportunity to explore areas of current interest in specific program or discipline areas. Emphasis is placed on subject matter appropriate to the program or discipline. Upon completion, students should be able to demonstrate an understanding of the specific area of study.

## Marketing and Retailing (MKT)

**MKT 120. Principles of Marketing. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course introduces principles and problems of marketing goods and services. Topics include promotion, placement, and pricing strategies for products. Upon completion, students should be able to apply marketing principles in organizational decision making.

Prerequisites: Complete one of the following options: Take DRE 098

Take EFL 111 EFL 112 with a minimum grade of C

Take ENG 111 with a minimum grade of C

Take ENG 112 with a minimum grade of C

Take ENG 113 with a minimum grade of C

Take ENG 114 with a minimum grade of C

**MKT 121. Retailing. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course examines the role of retailing in the economy. Topics include the development of present retail structure, functions performed, effective operations, and managerial problems resulting from current economic and social trends. Upon completion, students should be able to demonstrate an understanding of the basic principles of retailing.

Prerequisites: Complete one of the following options: Take DRE 098

Take EFL 111 EFL 112 with a minimum grade of C

Take ENG 111 with a minimum grade of C

Take ENG 112 with a minimum grade of C

Take ENG 113 with a minimum grade of C

Take ENG 114 with a minimum grade of C

**MKT 122. Visual Merchandising. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course introduces basic layout design and commercial display in retail and service organizations. Topics include an analysis of display as a visual merchandising medium and an examination of the principles and applications of display and design. Upon completion, students should be able to plan, build, and evaluate designs and displays.

Prerequisites: Complete one of the following options:Take DRE 098

Take EFL 111 EFL 112 with a minimum grade of C

Take ENG 111 with a minimum grade of C

Take ENG 112 with a minimum grade of C

Take ENG 113 with a minimum grade of C

Take ENG 114 with a minimum grade of C

**MKT 123. Fundamentals of Selling. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course is designed to emphasize the necessity of selling skills in a modern business environment. Emphasis is placed on sales techniques involved in various types of selling situations. Upon completion, students should be able to demonstrate an understanding of the techniques covered.

Prerequisites: Complete one of the following options:Take DRE 098

Take EFL 111 EFL 112 with a minimum grade of C

Take ENG 111 with a minimum grade of C

Take ENG 112 with a minimum grade of C

Take ENG 113 with a minimum grade of C

Take ENG 114 with a minimum grade of C

**MKT 220. Advertising and Sales Promotion. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course covers the elements of advertising and sales promotion in the business environment. Topics include advertising and sales promotion appeals, selection of media, use of advertising and sales promotion as a marketing tool, and means of testing effectiveness. Upon completion, students should be able to demonstrate an understanding of the concepts covered through application.

Prerequisites: Complete one of the following options:Take DRE 098

Take EFL 111 EFL 112 with a minimum grade of C

Take ENG 111 with a minimum grade of C

Take ENG 112 with a minimum grade of C

Take ENG 113 with a minimum grade of C

Take ENG 114 with a minimum grade of C

**MKT 221. Consumer Behavior. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course is designed to describe consumer behavior as applied to the exchange processes involved in acquiring, consuming, and disposing of goods and services. Topics include an analysis of basic and environmental determinants of consumer behavior with emphasis on the decision-making process. Upon completion, students should be able to analyze concepts related to the study of the individual consumer.

Prerequisites: Complete one of the following options:Take DRE 098

Take EFL 111 EFL 112 with a minimum grade of C

Take ENG 111 with a minimum grade of C

Take ENG 112 with a minimum grade of C

Take ENG 113 with a minimum grade of C

Take ENG 114 with a minimum grade of C

**MKT 223. Customer Service. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course stresses the importance of customer relations in the business world. Emphasis is placed on learning how to respond to complex customer requirements and to efficiently handle stressful situations. Upon completion, students should be able to demonstrate the ability to handle customer relations.

Prerequisites: Complete one of the following options:Take DRE 098

Take EFL 111 EFL 112 with a minimum grade of C

Take ENG 111 with a minimum grade of C

Take ENG 112 with a minimum grade of C

Take ENG 113 with a minimum grade of C

Take ENG 114 with a minimum grade of C

**MKT 224. International Marketing. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course covers the basic concepts of international marketing activity and theory. Topics include product promotion, placement, and pricing strategies in the international marketing environment. Upon completion, students should be able to demonstrate a basic understanding of the concepts covered.

Prerequisites: Complete one of the following options:Take DRE 098

Take EFL 111 EFL 112 with a minimum grade of C

Take ENG 111 with a minimum grade of C

Take ENG 112 with a minimum grade of C

Take ENG 113 with a minimum grade of C

Take ENG 114 with a minimum grade of C

**MKT 225. Marketing Research. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course provides information for decision making by providing guidance in developing, analyzing, and using data. Emphasis is placed on marketing research as a tool in decision making. Upon completion, students should be able to design and conduct a marketing research project and interpret the results.

Prerequisites: Complete one of the following options:Take DRE 098 and MKT 120 with a minimum grade of C

Take EFL 111, EFL 112, and MKT 120 with a minimum grade of C

Take ENG 111 and MKT 120 with a minimum grade of C

Take ENG 112 and MKT 120 with a minimum grade of C

Take ENG 113 and MKT 120 with a minimum grade of C

Take ENG 114 an

**MKT 227. Marketing Applications. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course extends the study of diverse marketing strategies. Emphasis is placed on case studies and small-group projects involving research or planning. Upon completion, students should be able to effectively participate in the formulation of a marketing strategy.

Prerequisites: Take MKT 120 Minimum grade C

**MKT 228. Service Marketing. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course is designed to define service marketing, demonstrate its importance, and note its special characteristics. Topics include basic building blocks of service marketing, distinctive aspects of services, and applications of service marketing mix. Upon completion, students should be able to demonstrate a basic understanding of the marketing mix as it applies to the service industry.

Prerequisites: Complete one of the following options:Take DRE 098

Take EFL 111 EFL 112 with a minimum grade of C

Take ENG 111 with a minimum grade of C

Take ENG 112 with a minimum grade of C

Take ENG 113 with a minimum grade of C

Take ENG 114 with a minimum grade of C

**MKT 229. Special Events Production. 2.0 Credits.** Class-2.0. Clinical-0.0. Lab-0.0. Work-0.0

This course introduces the different objectives of various special events and the procedures and elements necessary for successful promotional activity. Emphasis is placed on planning, budgeting, promoting, and coordinating activities. Upon completion, students should be able to utilize the elements studied in the production of special events.

Prerequisites: Complete one of the following options:Take DRE 098

Take EFL 111 ENG 112 with a minimum grade of C

Take ENG 111 with a minimum grade of C

Take ENG 112 with a minimum grade of C

Take ENG 113 with a minimum grade of C

Take ENG 114 with a minimum grade of C

**MKT 230. Public Relations. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course introduces public relations as it affects communications, strategic planning, and management of the organization. Topics include basic principles and functions of management that guide public relations activities as applied to businesses, services, institutions, and associations. Upon completion, students should be able to perform the communications, evaluation, planning, and research activities of the public relations professional.

Prerequisites: Complete one of the following options:Take DRE 098

Take EFL 111 EFL 112 with a minimum grade of C

Take ENG 111 with a minimum grade of C

Take ENG 112 with a minimum grade of C

Take ENG 113 with a minimum grade of C

Take ENG 114 with a minimum grade of C

**MKT 232. Social Media Marketing. 4.0 Credits.** Class-3.0. Clinical-0.0. Lab-2.0. Work-0.0

This course is designed to build students' social media marketing skills by utilizing projects that give students hands on experience implementing social media marketing strategies. Topics include integrating different social media technologies into a marketing plan, creating social media marketing campaigns, and applying appropriate social media tools. Upon completion, students should be able to use social media technologies to create and improve marketing efforts for businesses.

Prerequisites: Complete one of the following options:Take DRE 098

Take EFL 111 EFL 112 with a minimum grade of C

Take ENG 111 with a minimum grade of C

## Mathematics (MAT)

**MAT 110. Mathematical Measurement and Literacy. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0

This course provides an activity-based approach that develops measurement skills and mathematical literacy using technology to solve problems for non-math intensive programs. Topics include unit conversions and estimation within a variety of measurement systems; ratio and proportion; basic geometric concepts; financial literacy; and statistics including measures of central tendency, dispersion, and charting of data. Upon completion, students should be able to demonstrate the use of mathematics and technology to solve practical problems, and to analyze and communicate results.

Prerequisites: Complete one of the following options:Take DMA 010 DMA 020 DMA 030

Take DMA 025

**MAT 121AB. Algebra/Trigonometry I. 1.5 Credit.** Class-1.0. Clinical-0.0. Lab-1.0. Work-0.0

This course provides an integrated approach to technology and the skills required to manipulate, display, and interpret mathematical functions and formulas used in problem solving. Topics include the properties of plane and solid geometry, area and volume, and basic proportion applications; simplification, evaluation, and solving of algebraic equations and inequalities and radical functions; complex numbers; right triangle trigonometry; and systems of equations. Upon completion, students will be able to demonstrate the ability to use mathematics and technology for problem-solving, analyzing and communicating results.

Prerequisites: Take DMA 010 DMA 020 DMA 030 DMA 040 DMA 050 DMA 060

**MAT 121BB. Algebra/Trigonometry I. 1.5 Credit.** Class-1.0. Clinical-0.0. Lab-1.0. Work-0.0

This course provides an integrated approach to technology and the skills required to manipulate, display, and interpret mathematical functions and formulas used in problem solving. Topics include the properties of plane and solid geometry, area and volume, and basic proportion applications; simplification, evaluation, and solving of algebraic equations and inequalities and radical functions; complex numbers; right triangle trigonometry; and systems of equations. Upon completion, students will be able to demonstrate the ability to use mathematics and technology for problem-solving, analyzing and communicating results.

Prerequisites: Take DMA 010 DMA 020 DMA 030 DMA 040 DMA 050 DMA 060 MAT 121AB

**MAT 121. Algebra/Trigonometry I. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0

This course provides an integrated approach to technology and the skills required to manipulate, display, and interpret mathematical functions and formulas used in problem solving. Topics include the properties of plane and solid geometry, area and volume, and basic proportion applications; simplification, evaluation, and solving of algebraic equations and inequalities and radical functions; complex numbers; right triangle trigonometry; and systems of equations. Upon completion, students will be able to demonstrate the ability to use mathematics and technology for problem-solving, analyzing and communicating results.

Prerequisites: Complete one of the following options:

- DMA 010, DMA 020, DMA 030, DMA 040, DMA 050, and DMA 060
- DMA 010, DMA 020, DMA 030, DMA 045 and DMA 060
- DMA 025, DMA 040, DMA 050, and DMA 060
- DMA 025, DMA 045, and DMA 060
- MAT 003
- BSP 4003

**MAT 122. Algebra/Trigonometry II. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0

This course is designed to cover concepts in algebra, function analysis, and trigonometry. Topics include exponential and logarithmic functions, transformations of functions, Law of Sines, Law of Cosines, vectors, and statistics. Upon completion, students should be able to demonstrate the ability to use mathematics and technology for problem-solving, analyzing and communicating results.

Prerequisites: Take MAT 121 MAT 161 MAT 171 or MAT 175 Minimum grade C

**MAT 143AB. Quantitative Literacy. 1.5 Credit.** Class-1.0. Clinical-0.0. Lab-1.0. Work-0.0

This course is designed to engage students in complex and realistic situations involving the mathematical phenomena of quantity, change and relationship, and uncertainty through project- and activity-based assessment. Emphasis is placed on authentic contexts which will introduce the concepts of numeracy, proportional reasoning, dimensional analysis, rates of growth, personal finance, consumer statistics, practical probabilities, and mathematics for citizenship. Upon completion, students should be able to utilize quantitative information as consumers and to make personal, professional, and civic decisions by decoding, interpreting, using, and communicating quantitative information found in modern media and encountered in everyday life. Quantitative Literacy: Module I.

Prerequisites: Complete one of the following options: Take DMA 010, DMA 020, DMA 030, DMA 040, DMA 050, and DRE 098

Take DMA 025, DMA 040, DMA 050, and DRE 098

Take DMA 025, DMA 045, and DRE 098

Take DMA 010, DMA 020, DMA 030, DMA 045, and DRE 098

**MAT 143BB. Quantitative Literacy. 1.5 Credit.** Class-1.0. Clinical-0.0. Lab-1.0. Work-0.0

This course is designed to engage students in complex and realistic situations involving the mathematical phenomena of quantity, change and relationship, and uncertainty through project- and activity-based assessment. Emphasis is placed on authentic contexts which will introduce the concepts of numeracy, proportional reasoning, dimensional analysis, rates of growth, personal finance, consumer statistics, practical probabilities, and mathematics for citizenship. Upon completion, students should be able to utilize quantitative information as consumers and to make personal, professional, and civic decisions by decoding, interpreting, using, and communicating quantitative information found in modern media and encountered in everyday life. Quantitative Literacy: Module II.

Prerequisites: Complete one of the following options: Take DMA 010, DMA 020, DMA 030, DMA 040, DMA 050, and DRE 098

Take DMA 025, DMA 040, DMA 050, and DRE 098

Take DMA 025, DMA 045, and DRE 098

Take DMA 010, DMA 020, DMA 030, DMA 045, and DRE 098

Corequisites: Take MAT 143AB

**MAT 143. Quantitative Literacy. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0

This course is designed to engage students in complex and realistic situations involving the mathematical phenomena of quantity, change and relationship, and uncertainty through project- and activity-based assessment. Emphasis is placed on authentic contexts which will introduce the concepts of numeracy, proportional reasoning, dimensional analysis, rates of growth, personal finance, consumer statistics, practical probabilities, and mathematics for citizenship. Upon completion, students should be able to utilize quantitative information as consumers and to make personal, professional, and civic decisions by decoding, interpreting, using, and communicating quantitative information found in modern media and encountered in everyday life.

Prerequisites: Complete one of the following options: Take DMA 010 DMA 020 DMA 030 DMA 040 DMA 050 DRE 098

Take DMA 025 DMA 040 DMA 050 DRE 098

Take DMA 025 DMA 045 DRE 098

Take DMA 010 DMA 020 DMA 030 DMA 045 DRE 098

**MAT 152. Statistical Methods I. 4.0 Credits.** Class-3.0. Clinical-0.0. Lab-2.0. Work-0.0

This course provides a project-based approach to introductory statistics with an emphasis on using real-world data and statistical literacy. Topics include descriptive statistics, correlation and regression, basic probability, discrete and continuous probability distributions, confidence intervals and hypothesis testing. Upon completion, students should be able to use appropriate technology to describe important characteristics of a data set, draw inferences about a population from sample data, and interpret and communicate results.

Prerequisites: Complete one of the following options: Take DMA 010, DMA 020, DMA 030, DMA 040, DMA 050, and DRE 098

Take DMA 025, DMA 040, DMA 050, and DRE 098

Take DMA 025, DMA 045, and DRE 098

Take DMA 010, DMA 020, DMA 030, DMA 045, and DRE 098



**MAT 171. Precalculus Algebra. 4.0 Credits.** Class-3.0. Clinical-0.0. Lab-2.0. Work-0.0

This course is designed to develop topics which are fundamental to the study of Calculus. Emphasis is placed on solving equations and inequalities, solving systems of equations and inequalities, and analysis of functions (absolute value, radical, polynomial, rational, exponential, and logarithmic) in multiple representations. Upon completion, students should be able to select and use appropriate models and techniques for finding solutions to algebra-related problems with and without technology.

Prerequisites: Complete one of the following options:

- DMA 010, DMA 020, DMA 030, DMA 040, DMA 050, DMA 060, DMA 070, and DMA 080
- DMA 010, DMA 020, DMA 030, DMA 040, DMA 050, and DMA 065
- DMA 010, DMA 020, DMA 030, DMA 045, DMA 060,
- DMA 070, and DMA 080
- DMA 010, DMA-0

**MAT 172. Precalculus Trigonometry. 4.0 Credits.** Class-3.0. Clinical-0.0. Lab-2.0. Work-0.0

This course is designed to develop an understanding of topics which are fundamental to the study of Calculus. Emphasis is placed on the analysis of trigonometric functions in multiple representations, right and oblique triangles, vectors, polar coordinates, conic sections, and parametric equations. Upon completion, students should be able to select and use appropriate models and techniques for finding solutions to trigonometry-related problems with and without technology.

Prerequisites: Take MAT 171 Minimum grade C

**MAT 223. Applied Calculus. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0

This course provides an introduction to the calculus concepts of differentiation and integration by way of application and is designed for engineering technology students. Topics include limits, slope, derivatives, related rates, areas, integrals, and applications. Upon completion, students should be able to demonstrate an understanding of the use of calculus and technology to solve problems and to analyze and communicate results.

Prerequisites: Take MAT 122 MAT 172 or MAT 175 Minimum grade C

**MAT 263. Brief Calculus. 4.0 Credits.** Class-3.0. Clinical-0.0. Lab-2.0. Work-0.0

This course is designed to introduce concepts of differentiation and integration and their applications to solving problems. Topics include graphing, differentiation, and integration with emphasis on applications drawn from business, economics, and biological and behavioral sciences. Upon completion, students should be able to demonstrate an understanding of the use of basic calculus and technology to solve problems and to analyze and communicate results.

Prerequisites: Take MAT 171 Minimum grade C

**MAT 271. Calculus I. 4.0 Credits.** Class-3.0. Clinical-0.0. Lab-2.0. Work-0.0

This course is designed to develop the topics of differential and integral calculus. Emphasis is placed on limits, continuity, derivatives and integrals of algebraic and transcendental functions of one variable. Upon completion, students should be able to select and use appropriate models and techniques for finding solutions to derivative-related problems with and without technology.

Prerequisites: Take MAT 172 or MAT 175 Minimum grade C

**MAT 272. Calculus II. 4.0 Credits.** Class-3.0. Clinical-0.0. Lab-2.0. Work-0.0

This course is designed to develop advanced topics of differential and integral calculus. Emphasis is placed on the applications of definite integrals, techniques of integration, indeterminate forms, improper integrals, infinite series, conic sections, parametric equations, polar coordinates, and differential equations. Upon completion, students should be able to select and use appropriate models and techniques for finding solutions to integral-related problems with and without technology.

Prerequisites: Take MAT 271 Minimum grade C

**MAT 273. Calculus III. 4.0 Credits.** Class-3.0. Clinical-0.0. Lab-2.0. Work-0.0

This course is designed to develop the topics of multivariate calculus. Emphasis is placed on multivariate functions, partial derivatives, multiple integration, solid analytical geometry, vector valued functions, and line and surface integrals. Upon completion, students should be able to select and use appropriate models and techniques for finding the solution to multivariate-related problems with and without technology.

Prerequisites: Take MAT 272 Minimum grade C

**MAT 280. Linear Algebra. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0

This course provides an introduction to linear algebra topics. Emphasis is placed on the development of abstract concepts and applications for vectors, systems of equations, matrices, determinants, vector spaces, multi-dimensional linear transformations, eigenvectors, eigenvalues, diagonalization and orthogonality. Upon completion, students should be able to demonstrate understanding of the theoretical concepts and select and use appropriate models and techniques for finding solutions to linear algebra-related problems with and without technology.

Prerequisites: Take MAT 271

**MAT 285. Differential Equations. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0

This course provides an introduction to topics involving ordinary differential equations. Emphasis is placed on the development of abstract concepts and applications for first-order and linear higher-order differential equations, systems of differential equations, numerical methods, series solutions, eigenvalues and eigenvectors, and Laplace transforms. Upon completion, students should be able to demonstrate understanding of the theoretical concepts and select and use appropriate models and techniques for finding solutions to differential equations-related problems with and without technology.

Prerequisites: Take MAT 272 or MAT 273 Minimum grade C

## Math Skills Support (MAT)

**MAT 001. Math Skills Support. 1.0 Credit.** Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0

This course provides opportunities for students to build a stronger foundation for success in their corequisite math course by obtaining skills through a variety of instructional strategies. Emphasis is placed on foundational skills as well as concepts, skills, vocabulary and definitions necessary to master student learning outcomes of the co-requisite math course. Upon completion, students should be able to apply mathematical concepts and critical thinking skills to solve problems relevant to the student's co-requisite math course.

Corequisites: Take One Course: MAT 110 MAT 121 MAT 143 MAT 152 or MAT 171



**MAT 001. Math Skills Support. 1.0 Credit.** Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0

This course provides opportunities for students to build a stronger foundation for success in their corequisite math course by obtaining skills through a variety of instructional strategies. Emphasis is placed on foundational skills as well as concepts, skills, vocabulary and definitions necessary to master student learning outcomes of the co-requisite math course. Upon completion, students should be able to apply mathematical concepts and critical thinking skills to solve problems relevant to the student's co-requisite math course.

Corequisites: Take One Course: MAT 110 MAT 121 MAT 143 MAT 152 or MAT 171

**MAT 003. Transition Math. 3.0 Credits.** Class-0.0. Clinical-0.0. Lab-6.0. Work-0.0

This course provides an opportunity to customize foundational math content in specific math areas and will include developing a growth mindset. Topics include developing the academic habits, learning strategies, social skills, and growth mindset necessary to be successful in mathematics. Upon completion, students should be able to build a stronger foundation for success in their gateway level math courses by obtaining skills through a variety of instructional strategies with emphasis placed on the most essential prerequisite knowledge.

**MAT 010. Math Measurement & Literacy Su. 1.0 Credit.** Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0

This course provides an opportunity to customize foundational math content specific to Math Measurement & Literacy. Topics include developing the academic habits, learning strategies, social skills, and growth mindset necessary to be successful in mathematics. Upon completion, students should be able to build a stronger foundation for success in Math Measurement & Literacy by obtaining skills through a variety of instructional strategies with emphasis placed on the most essential prerequisite knowledge.

**MAT 021. Algebra/Trigonometry I Support. 2.0 Credits.** Class-1.0. Clinical-0.0. Lab-2.0. Work-0.0

This course provides an opportunity to customize foundational math content specific to Algebra and Trigonometry I. Topics include developing the academic habits, learning strategies, social skills, and growth mindset necessary to be successful in mathematics. Upon completion, students should be able to build a stronger foundation for success in Algebra/Trigonometry I by obtaining skills through a variety of instructional strategies with emphasis placed on the most essential prerequisite knowledge.

**MAT 043. Quantitative Literacy Support Class. 2.0 Credits.** Class-1.0. Clinical-0.0. Lab-2.0. Work-0.0

This course provides an opportunity to customize foundational math content specific to Quantitative Literacy. Topics include developing the academic habits, learning strategies, social skills, and growth mindset necessary to be successful in mathematics. Upon completion, students should be able to build a stronger foundation for success in Quantitative Literacy by obtaining skills through a variety of instructional strategies with emphasis placed on the most essential prerequisite knowledge.

**MAT 052. Statistical Methods I Support. 2.0 Credits.** Class-1.0. Clinical-0.0. Lab-2.0. Work-0.0

This course provides an opportunity to customize foundational math content specific to Statistical Methods I. Topics include developing the academic habits, learning strategies, social skills, and growth mindset necessary to be successful in mathematics. Upon completion, students should be able to build a stronger foundation for success in Statistical Methods I by obtaining skills through a variety of instructional strategies with emphasis placed on the most essential prerequisite knowledge.

**MAT 071. 071 Precalculus Algebra Support. 2.0 Credits.** Class-0.0. Clinical-0.0. Lab-4.0. Work-0.0

This course provides an opportunity to customize foundational math content specific to Precalculus Algebra. Topics include developing the academic habits, learning strategies, social skills, and growth mindset necessary to be successful in mathematics. Upon completion, students should be able to build a stronger foundation for success in Precalculus Algebra by obtaining skills through a variety of instructional strategies with emphasis placed on the most essential prerequisite knowledge.

**MAT 110. Mathematical Measurement and Literacy. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0

This course provides an activity-based approach that develops measurement skills and mathematical literacy using technology to solve problems for non-math intensive programs. Topics include unit conversions and estimation within a variety of measurement systems; ratio and proportion; basic geometric concepts; financial literacy; and statistics including measures of central tendency, dispersion, and charting of data. Upon completion, students should be able to demonstrate the use of mathematics and technology to solve practical problems, and to analyze and communicate results.

Prerequisites: Complete one of the following options: Take DMA 010 DMA 020 DMA 030  
Take DMA 025

**MAT 121AB. Algebra/Trigonometry I. 1.5 Credit.** Class-1.0. Clinical-0.0. Lab-1.0. Work-0.0

This course provides an integrated approach to technology and the skills required to manipulate, display, and interpret mathematical functions and formulas used in problem solving. Topics include the properties of plane and solid geometry, area and volume, and basic proportion applications; simplification, evaluation, and solving of algebraic equations and inequalities and radical functions; complex numbers; right triangle trigonometry; and systems of equations. Upon completion, students will be able to demonstrate the ability to use mathematics and technology for problem-solving, analyzing and communicating results.

Prerequisites: Take DMA 010 DMA 020 DMA 030 DMA 040 DMA 050 DMA 060

**MAT 121BB. Algebra/Trigonometry I. 1.5 Credit.** Class-1.0. Clinical-0.0. Lab-1.0. Work-0.0

This course provides an integrated approach to technology and the skills required to manipulate, display, and interpret mathematical functions and formulas used in problem solving. Topics include the properties of plane and solid geometry, area and volume, and basic proportion applications; simplification, evaluation, and solving of algebraic equations and inequalities and radical functions; complex numbers; right triangle trigonometry; and systems of equations. Upon completion, students will be able to demonstrate the ability to use mathematics and technology for problem-solving, analyzing and communicating results.

Prerequisites: Take DMA 010 DMA 020 DMA 030 DMA 040 DMA 050 DMA 060 MAT 121AB

**MAT 121. Algebra/Trigonometry I. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0

This course provides an integrated approach to technology and the skills required to manipulate, display, and interpret mathematical functions and formulas used in problem solving. Topics include the properties of plane and solid geometry, area and volume, and basic proportion applications; simplification, evaluation, and solving of algebraic equations and inequalities and radical functions; complex numbers; right triangle trigonometry; and systems of equations. Upon completion, students will be able to demonstrate the ability to use mathematics and technology for problem-solving, analyzing and communicating results.

Prerequisites: Complete one of the following options:

- DMA 010, DMA 020, DMA 030, DMA 040, DMA 050, and DMA 060
- DMA 010, DMA 020, DMA 030, DMA 045 and DMA 060
- DMA 025, DMA 040, DMA 050, and DMA 060
- DMA 025, DMA 045, and DMA 060
- MAT 003
- BSP 4003

**MAT 122. Algebra/Trigonometry II. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0

This course is designed to cover concepts in algebra, function analysis, and trigonometry. Topics include exponential and logarithmic functions, transformations of functions, Law of Sines, Law of Cosines, vectors, and statistics. Upon completion, students should be able to demonstrate the ability to use mathematics and technology for problem-solving, analyzing and communicating results.

Prerequisites: Take MAT 121 MAT 161 MAT 171 or MAT 175 Minimum grade C

**MAT 143AB. Quantitative Literacy. 1.5 Credit.** Class-1.0. Clinical-0.0. Lab-1.0. Work-0.0

This course is designed to engage students in complex and realistic situations involving the mathematical phenomena of quantity, change and relationship, and uncertainty through project- and activity-based assessment. Emphasis is placed on authentic contexts which will introduce the concepts of numeracy, proportional reasoning, dimensional analysis, rates of growth, personal finance, consumer statistics, practical probabilities, and mathematics for citizenship. Upon completion, students should be able to utilize quantitative information as consumers and to make personal, professional, and civic decisions by decoding, interpreting, using, and communicating quantitative information found in modern media and encountered in everyday life. Quantitative Literacy: Module I.

Prerequisites: Complete one of the following options: Take DMA 010, DMA 020, DMA 030, DMA 040, DMA 050, and DRE 098

Take DMA 025, DMA 040, DMA 050, and DRE 098

Take DMA 025, DMA 045, and DRE 098

Take DMA 010, DMA 020, DMA 030, DMA 045, and DRE 098

**MAT 143BB. Quantitative Literacy. 1.5 Credit.** Class-1.0. Clinical-0.0. Lab-1.0. Work-0.0

This course is designed to engage students in complex and realistic situations involving the mathematical phenomena of quantity, change and relationship, and uncertainty through project- and activity-based assessment. Emphasis is placed on authentic contexts which will introduce the concepts of numeracy, proportional reasoning, dimensional analysis, rates of growth, personal finance, consumer statistics, practical probabilities, and mathematics for citizenship. Upon completion, students should be able to utilize quantitative information as consumers and to make personal, professional, and civic decisions by decoding, interpreting, using, and communicating quantitative information found in modern media and encountered in everyday life. Quantitative Literacy: Module II.

Prerequisites: Complete one of the following options: Take DMA 010, DMA 020, DMA 030, DMA 040, DMA 050, and DRE 098

Take DMA 025, DMA 040, DMA 050, and DRE 098

Take DMA 025, DMA 045, and DRE 098

Take DMA 010, DMA 020, DMA 030, DMA 045, and DRE 098

Corequisites: Take MAT 143AB

**MAT 143. Quantitative Literacy. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0

This course is designed to engage students in complex and realistic situations involving the mathematical phenomena of quantity, change and relationship, and uncertainty through project- and activity-based assessment. Emphasis is placed on authentic contexts which will introduce the concepts of numeracy, proportional reasoning, dimensional analysis, rates of growth, personal finance, consumer statistics, practical probabilities, and mathematics for citizenship. Upon completion, students should be able to utilize quantitative information as consumers and to make personal, professional, and civic decisions by decoding, interpreting, using, and communicating quantitative information found in modern media and encountered in everyday life.

Prerequisites: Complete one of the following options: Take DMA 010 DMA 020 DMA 030 DMA 040 DMA 050 DRE 098

Take DMA 025 DMA 040 DMA 050 DRE 098

Take DMA 025 DMA 045 DRE 098

Take DMA 010 DMA 020 DMA 030 DMA 045 DRE 098

**MAT 152. Statistical Methods I. 4.0 Credits.** Class-3.0. Clinical-0.0. Lab-2.0. Work-0.0

This course provides a project-based approach to introductory statistics with an emphasis on using real-world data and statistical literacy. Topics include descriptive statistics, correlation and regression, basic probability, discrete and continuous probability distributions, confidence intervals and hypothesis testing. Upon completion, students should be able to use appropriate technology to describe important characteristics of a data set, draw inferences about a population from sample data, and interpret and communicate results.

Prerequisites: Complete one of the following options: Take DMA 010, DMA 020, DMA 030, DMA 040, DMA 050, and DRE 098

Take DMA 025, DMA 040, DMA 050, and DRE 098

Take DMA 025, DMA 045, and DRE 098

Take DMA 010, DMA 020, DMA 030, DMA 045, and DRE 098



**MAT 171. Precalculus Algebra. 4.0 Credits.** Class-3.0. Clinical-0.0. Lab-2.0. Work-0.0

This course is designed to develop topics which are fundamental to the study of Calculus. Emphasis is placed on solving equations and inequalities, solving systems of equations and inequalities, and analysis of functions (absolute value, radical, polynomial, rational, exponential, and logarithmic) in multiple representations. Upon completion, students should be able to select and use appropriate models and techniques for finding solutions to algebra-related problems with and without technology.

Prerequisites: Complete one of the following options:

- DMA 010, DMA 020, DMA 030, DMA 040, DMA 050, DMA 060, DMA 070, and DMA 080
- DMA 010, DMA 020, DMA 030, DMA 040, DMA 050, and DMA 065
- DMA 010, DMA 020, DMA 030, DMA 045, DMA 060,
- DMA 070, and DMA 080
- DMA 010, DMA-0

**MAT 172. Precalculus Trigonometry. 4.0 Credits.** Class-3.0. Clinical-0.0. Lab-2.0. Work-0.0

This course is designed to develop an understanding of topics which are fundamental to the study of Calculus. Emphasis is placed on the analysis of trigonometric functions in multiple representations, right and oblique triangles, vectors, polar coordinates, conic sections, and parametric equations. Upon completion, students should be able to select and use appropriate models and techniques for finding solutions to trigonometry-related problems with and without technology.

Prerequisites: Take MAT 171 Minimum grade C

**MAT 223. Applied Calculus. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0

This course provides an introduction to the calculus concepts of differentiation and integration by way of application and is designed for engineering technology students. Topics include limits, slope, derivatives, related rates, areas, integrals, and applications. Upon completion, students should be able to demonstrate an understanding of the use of calculus and technology to solve problems and to analyze and communicate results.

Prerequisites: Take MAT 122 MAT 172 or MAT 175 Minimum grade C

**MAT 263. Brief Calculus. 4.0 Credits.** Class-3.0. Clinical-0.0. Lab-2.0. Work-0.0

This course is designed to introduce concepts of differentiation and integration and their applications to solving problems. Topics include graphing, differentiation, and integration with emphasis on applications drawn from business, economics, and biological and behavioral sciences. Upon completion, students should be able to demonstrate an understanding of the use of basic calculus and technology to solve problems and to analyze and communicate results.

Prerequisites: Take MAT 171 Minimum grade C

**MAT 271. Calculus I. 4.0 Credits.** Class-3.0. Clinical-0.0. Lab-2.0. Work-0.0

This course is designed to develop the topics of differential and integral calculus. Emphasis is placed on limits, continuity, derivatives and integrals of algebraic and transcendental functions of one variable. Upon completion, students should be able to select and use appropriate models and techniques for finding solutions to derivative-related problems with and without technology.

Prerequisites: Take MAT 172 or MAT 175 Minimum grade C

**MAT 272. Calculus II. 4.0 Credits.** Class-3.0. Clinical-0.0. Lab-2.0. Work-0.0

This course is designed to develop advanced topics of differential and integral calculus. Emphasis is placed on the applications of definite integrals, techniques of integration, indeterminate forms, improper integrals, infinite series, conic sections, parametric equations, polar coordinates, and differential equations. Upon completion, students should be able to select and use appropriate models and techniques for finding solutions to integral-related problems with and without technology.

Prerequisites: Take MAT 271 Minimum grade C

**MAT 273. Calculus III. 4.0 Credits.** Class-3.0. Clinical-0.0. Lab-2.0. Work-0.0

This course is designed to develop the topics of multivariate calculus. Emphasis is placed on multivariate functions, partial derivatives, multiple integration, solid analytical geometry, vector valued functions, and line and surface integrals. Upon completion, students should be able to select and use appropriate models and techniques for finding the solution to multivariate-related problems with and without technology.

Prerequisites: Take MAT 272 Minimum grade C

**MAT 280. Linear Algebra. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0

This course provides an introduction to linear algebra topics. Emphasis is placed on the development of abstract concepts and applications for vectors, systems of equations, matrices, determinants, vector spaces, multi-dimensional linear transformations, eigenvectors, eigenvalues, diagonalization and orthogonality. Upon completion, students should be able to demonstrate understanding of the theoretical concepts and select and use appropriate models and techniques for finding solutions to linear algebra-related problems with and without technology.

Prerequisites: Take MAT 271

**MAT 285. Differential Equations. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0

This course provides an introduction to topics involving ordinary differential equations. Emphasis is placed on the development of abstract concepts and applications for first-order and linear higher-order differential equations, systems of differential equations, numerical methods, series solutions, eigenvalues and eigenvectors, and Laplace transforms. Upon completion, students should be able to demonstrate understanding of the theoretical concepts and select and use appropriate models and techniques for finding solutions to differential equations-related problems with and without technology.

Prerequisites: Take MAT 272 or MAT 273 Minimum grade C

## Mechanical (MEC)

**MEC 110. Introduction to CAD/CAM. 2.0 Credits.** Class-1.0. Clinical-0.0. Lab-2.0. Work-0.0

This course introduces CAD/CAM. Emphasis is placed on transferring part geometry from CAD to CAM for the development of a CNC-ready program. Upon completion, students should be able to use CAD/CAM software to produce a CNC program.

Prerequisites: Take DFT 154

**MEC 111. Machine Processes I. 3.0 Credits.** Class-1.0. Clinical-0.0. Lab-4.0. Work-0.0

This course introduces shop safety, hand tools, machine processes, measuring instruments, and the operation of machine shop equipment. Topics include use and care of tools, safety, measuring tools, and the basic setup and operation of common machine tools. Upon completion, students should be able to manufacture simple parts to specified tolerance.

**MEC 130. Mechanisms. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0

This course introduces the purpose and action of various mechanical devices. Topics include cams, cables, gear trains, differentials, screws, belts, pulleys, shafts, levers, lubricants, and other devices. Upon completion, students should be able to analyze, maintain, and troubleshoot the components of mechanical systems.

**MEC 155. Environmentally Benign Manufacturing. 3.0 Credits.**

Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0

This course introduces environmental issues involving the generation and management of hazardous materials and wastes in manufacturing operations. Topics include the analysis of manufacturing trends, pollution minimization strategies, and the advantages of incorporating a sustainable approach to manufacturing. Upon completion, students should be able to discuss analysis and modification of industrial processes in manufacturing facilities toward a sustainable end.

**MEC 161. Manufacturing Processes I. 3.0 Credits.** Class-3.0.

Clinical-0.0. Lab-0.0. Work-0.0

This course provides the fundamental principles of value-added processing of materials into usable forms for the customer. Topics include material properties and traditional and non-traditional manufacturing processes. Upon completion, students should be able to specify appropriate manufacturing processing for common engineering materials.

**MEC 172. Introduction to Metallurgy. 3.0 Credits.** Class-2.0.

Clinical-0.0. Lab-2.0. Work-0.0

This course covers the production, properties, testing, classification, microstructure, and heat-treating effects of ferrous and non-ferrous metals. Topics include the iron-carbon phase diagram, ITT diagram, ANSI code, quenching, senescing, and other processes concerning metallurgical transformations. Upon completion, students should be able to understand the iron-carbon phase diagram, ITT diagram, microstructure images, and other phenomena concerning the behavior of metals.

**MEC 180. Engineering Materials. 3.0 Credits.** Class-2.0. Clinical-0.0.

Lab-3.0. Work-0.0

This course introduces the physical and mechanical properties of materials. Topics include materials testing, pre- and post-manufacturing processes, and material selection of ferrous and non-ferrous metals, plastics, composites, and non-conventional materials. Upon completion, students should be able to utilize basic material property tests and select appropriate materials for applications. This course covers the physical and mechanical properties of materials. Topics include testing, heat treating, ferrous and non-ferrous metals, plastics, composites, and material selection. Upon completion, students should be able to specify basic tests and properties and select appropriate materials on the basis of specific properties.

Prerequisites: Take ENG 111 ENG 112 or ENG 113

**MEC 210. Applied Mechanics. 3.0 Credits.** Class-2.0. Clinical-0.0.

Lab-2.0. Work-0.0

This course is a study of forces, stresses, and strains acting upon mechanical components. Topics include static equilibrium; normal, shear, and bending stresses; mathematical and graphical solution techniques; and the relationship between stress and strain. Upon completion, students should be able to demonstrate proficiency in analyzing the forces, stresses, and strains common to applications in the workplace.

Prerequisites: Take PHY 131 PHY 151 or PHY 251

**MEC 260. Fundamentals of Machine Design. 3.0 Credits.** Class-2.0.

Clinical-0.0. Lab-3.0. Work-0.0

This course introduces the fundamental principles of machine design. Topics include simple analysis of forces, moments, stresses, strains, friction, kinematics, and other considerations for designing machine elements. Upon completion, students should be able to analyze machine components and make component selections from manufacturers' catalogs.

Prerequisites: Take MEC 180

Take MEC 210

Take DFT 154 or DFT 170

Corequisites: Take MEC 130

**MEC 265. Fluid Mechanics. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-2.0.

Work-0.0

This course covers the physical behavior of fluids and fluid systems. Topics include fluid statics and dynamics, laminar and turbulent flow, Bernoulli's Equation, components, applications, and other related topics. Upon completion, students should be able to apply fluid power principles to practical applications.

Prerequisites: Take PHY 131 PHY 151 or PHY 251

**MEC 267. Thermal Systems. 3.0 Credits.** Class-2.0. Clinical-0.0.

Lab-2.0. Work-0.0

This course introduces the fundamental laws of thermodynamics. Topics include work and energy, open and closed systems, and heat engines. Upon completion, students should be able to demonstrate a knowledge of the laws and principles that apply to thermal power.

Prerequisites: Take One: PHY 131 or PHY 151

**MEC 270. Machine Design. 4.0 Credits.** Class-3.0. Clinical-0.0. Lab-3.0.

Work-0.0

This course covers the basic principles underlying design and selection of machine elements. Topics include stress analysis, selection of components, power transmission, and other design considerations. Upon completion, students should be able to identify and solve mechanical design problems by applying basic engineering principles.

Prerequisites: Complete one of the following options: Take EGR 250

Take EGR 251 and EGR 252

**MEC 275. Engineering Mechanisms. 3.0 Credits.** Class-2.0. Clinical-0.0.

Lab-2.0. Work-0.0

This course covers plane motion and devices used to generate plane motion. Topics include analysis of displacement, velocity, acceleration, gears, cams, and other mechanical systems. Upon completion, students should be able to graphically and mathematically analyze a plane motion system.

Prerequisites: Take PHY 131 PHY 151 or PHY 251

Take MAT 122 or MAT 172

**MEC 292. Selected Topics in Mechanical Engineering Technology. 2.0**

**Credits.** Class-1.0. Clinical-0.0. Lab-2.0. Work-0.0

**MEC 293. Selected Topics in Mechanical Engr. Tech Engineering**

**Technology. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0

## Medical Assisting (MED)

**MED 110. Orientation to Medical Assisting. 1.0 Credit.** Class-1.0.

Clinical-0.0. Lab-0.0. Work-0.0

This course covers the history of medicine and the role of the medical assistant in the health care setting. Emphasis is placed on professionalism, communication, attitude, behaviors, and duties in the medical environment. Upon completion, students should be able to project a positive attitude and promote the profession of medical assisting.

**MED 116. Introduction to Anatomy & Physiology. 4.0 Credits.**

Class-3.0. Clinical-0.0. Lab-2.0. Work-0.0

This course introduces basic anatomy and physiology. Emphasis is placed on the relationship between body structure and function and the procedures common to health care. Upon completion, students should be able to identify body system components and functions relating this knowledge to the delivery of health care.

**MED 118. Medical Law and Ethics. 2.0 Credits.** Class-2.0. Clinical-0.0. Lab-0.0. Work-0.0

This course covers legal relationships of physicians and patients, contractual agreements, professional liability, malpractice, medical practice acts, informed consent, and bioethical issues. Emphasis is placed on legal terms, professional attitudes, and the principles and basic concepts of ethics and laws involved in providing medical services. Upon completion, students should be able to meet the legal and ethical responsibilities of a multi-skilled health professional.

**MED 120. Survey of Medical Terminology. 2.0 Credits.** Class-2.0. Clinical-0.0. Lab-0.0. Work-0.0

This course introduces the vocabulary, abbreviations, and symbols used in the language of medicine. Emphasis is placed on building medical terms using prefixes, suffixes, and word roots. Upon completion, students should be able to pronounce, spell, and define accepted medical terms.

**MED 121. Medical Terminology I. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course introduces prefixes, suffixes, and word roots used in the language of medicine. Topics include medical vocabulary and the terms that relate to the anatomy, physiology, pathological conditions, and treatment of selected systems. Upon completion, students should be able to pronounce, spell, and define medical terms as related to selected body systems and their pathological disorders.

**MED 122. Medical Terminology II. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course is the second in a series of medical terminology courses. Topics include medical vocabulary and the terms that relate to the anatomy, physiology, pathological conditions, and treatment of selected systems. Upon completion, students should be able to pronounce, spell, and define medical terms as related to selected body systems and their pathological disorders.

Prerequisites: Take MED 121 Minimum grade C

**MED 130. Administrative Office Procedures I. 2.0 Credits.** Class-1.0. Clinical-0.0. Lab-2.0. Work-0.0

This course introduces medical office administrative procedures. Topics include appointment processing, written and oral communications, medical records, patient orientation, and safety. Upon completion, students should be able to perform basic administrative skills within the medical environment.

**MED 131. Administrative Office Procedures II. 2.0 Credits.** Class-1.0. Clinical-0.0. Lab-2.0. Work-0.0

This course provides medical office procedures in both economic and management skills. Topics include physical plant maintenance, equipment and supplies, liability coverage, medical economics, and introductory insurance procedures. Upon completion, students should be able to manage the economics of the medical office and supervise personnel.

**MED 134. Medical Transcription. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0

This course provides the basic knowledge, understanding, and skills required to complete medical reports and transcribe medical dictation. Emphasis is placed on correct punctuation, capitalization, and spelling. Upon completion, students should be able to demonstrate competence in medical transcription.

Prerequisites: Take MED 121 MED 116 Minimum grade C

**MED 140. Examining Room Procedures I. 5.0 Credits.** Class-3.0. Clinical-0.0. Lab-4.0. Work-0.0

This course provides instruction in clinical examining room procedures. Topics include asepsis, infection control, assisting with exams and treatment, patient education, preparation and administration of medications, EKG, vital signs, and medical emergencies. Upon completion, students should be able to demonstrate competence in exam room procedures.

**MED 150. Laboratory Procedures I. 5.0 Credits.** Class-3.0. Clinical-0.0. Lab-4.0. Work-0.0

This course provides instruction in basic lab techniques used by the medical assistant. Topics include lab safety, quality control, collecting and processing specimens, performing selective tests, phlebotomy, screening and follow-up of test results, and OSHA/CLIA regulations. Upon completion, students should be able to perform basic lab tests/skills based on course topics.

Corequisites: Take MED 240

**MED 183. Electronic Medical Records I. 5.0 Credits.** Class-3.0. Clinical-3.0. Lab-2.0. Work-0.0

This course introduces students to the design and creation of Electronic Methods Records using a variety of EMR models. Topics include historical background of electronic medical records, legal/ethical principles inherent to healthcare information, patient flow, scheduling, call processing and tasking using the EMR. Upon completion, students should be able to discuss the history of EMR, identify emerging issues, apply ethical principles, and use basic modules of an EMR.

Corequisites: Take One: CIS 110, CIS 111 or OST 131

**MED 232. Medical Insurance Coding. 2.0 Credits.** Class-1.0. Clinical-0.0. Lab-3.0. Work-0.0

This course is designed to develop coding skills. Emphasis is placed on advanced diagnostic and procedural coding in the outpatient facility. Upon completion, students should be able to demonstrate proficiency in coding for reimbursement.

**MED 240. Examining Room Procedures II. 5.0 Credits.** Class-3.0. Clinical-0.0. Lab-4.0. Work-0.0

This course is designed to expand and build upon skills presented in MED 140. Emphasis is placed on advanced exam room procedures. Upon completion, students should be able to demonstrate enhanced competence in selected exam room procedures.

Prerequisites: Take MED 140 Minimum grade C

Corequisites: Take MED 150

**MED 260. MED Clinical Practicum. 5.0 Credits.** Class-0.0. Clinical-15.0. Lab-0.0. Work-0.0

This course provides the opportunity to apply clinical, laboratory, and administrative skills in a medical facility. Emphasis is placed on enhancing competence in clinical and administrative skills necessary for comprehensive patient care and strengthening professional communications and interactions. Upon completion, students should be able to function as an entry-level health care professional.

Corequisites: Take MED 262

**MED 262. Clinical Perspectives. 1.0 Credit.** Class-1.0. Clinical-0.0. Lab-0.0. Work-0.0

This course is designed to explore personal and occupational responsibilities of the practicing medical assistant. Emphasis is placed on problems encountered during externships and development of problem-solving skills. Upon completion, students should be able to demonstrate courteous and diplomatic behavior when solving problems in the medical facility.

Corequisites: Take MED 260

**MED 270. Symptomatology. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0

This course covers the study of disease symptoms and the appropriate actions taken by medical assistants in a medical facility in relation to these symptoms. Emphasis is placed on interviewing skills and appropriate triage, preparing patients for procedures, and screening test results. Upon completion, students should be able to recognize how certain symptoms relate to specific diseases, recognize emergency situations, and take appropriate actions.

**MED 272. Drug Therapy. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course focuses on major drug groups, including their side effects, interactions, methods of administration, and proper documentation. Emphasis is placed on the theory of drug administration. Upon completion, students should be able to identify, spell, recognize side effects of, and document the most commonly used medications in a physician's office.

**MED 274. Diet Therapy/Nutrition. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course introduces the basic principles of nutrition as they relate to health and disease. Topics include basic nutrients, physiology, dietary deficiencies, weight management, and therapeutic nutrition in wellness and disease. Upon completion, students should be able to interpret clinical and dietary data and provide patient counseling and education.

## Medical Laboratory Technology (MLT)

**MLT 110. Introduction to MLT. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0

This course introduces all aspects of the medical laboratory profession. Topics include health care/laboratory organization, professional ethics, basic laboratory techniques, safety, quality assurance, and specimen collection. Upon completion, students should be able to demonstrate a basic understanding of laboratory operations and be able to perform basic laboratory skills.

**MLT 111. Urinalysis & Body Fluids. 2.0 Credits.** Class-1.0. Clinical-0.0. Lab-3.0. Work-0.0

This course introduces the laboratory analysis of urine and body fluids. Topics include physical, chemical, and microscopic examination of the urine and body fluids. Upon completion, students should be able to demonstrate theoretical comprehension in performing and interpreting urinalysis and body fluid tests.

Prerequisites: Take MLT 120 Minimum grade C

**MLT 120. Hematology/Hemostasis I. 4.0 Credits.** Class-3.0. Clinical-0.0. Lab-3.0. Work-0.0

This course introduces the theory and technology used in analyzing blood cells and the study of hemostasis. Topics include hematology, hemostasis, and related laboratory testing. Upon completion, students should be able to demonstrate theoretical comprehension of hematology/hemostasis, perform diagnostic techniques, and correlate laboratory findings with disorders.

**MLT 126. Immunology and Serology. 2.0 Credits.** Class-1.0. Clinical-0.0. Lab-2.0. Work-0.0

This course introduces the immune system and response and basic concepts of antigens, antibodies, and their reactions. Emphasis is placed on basic principles of immunologic and serodiagnostic techniques and concepts of cellular and humoral immunity in health and disease. Upon completion, students should be able to demonstrate theoretical comprehension and application in performing and interpreting routine immunologic and serodiagnostic procedures.

**MLT 127. Transfusion Medicine. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0

This course introduces the blood group systems and their applications in transfusion medicine. Emphasis is placed on blood bank techniques including blood grouping and typing, pretransfusion testing, donor selection and processing, and blood component preparation and therapy. Upon completion, students should be able to demonstrate theoretical comprehension and application in performing/interpreting routine blood bank procedures and recognizing/resolving common problems.

Prerequisites: Take MLT 126 Minimum grade C

**MLT 130. Clinical Chemistry I. 4.0 Credits.** Class-3.0. Clinical-0.0. Lab-3.0. Work-0.0

This course introduces the quantitative analysis of blood and body fluids and their variations in health and disease. Topics include clinical biochemistry, methodologies, instrumentation, and quality control. Upon completion, students should be able to demonstrate theoretical comprehension of clinical chemistry, perform diagnostic techniques, and correlate laboratory findings with disorders.

Prerequisites: Take CHM 130 CHM 130A

**MLT 140. Introduction to Microbiology. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0

This course introduces basic techniques and safety procedures in clinical microbiology. Emphasis is placed on the morphology and identification of common pathogenic organisms, aseptic technique, staining techniques, and usage of common media. Upon completion, students should be able to demonstrate theoretical comprehension in performing and interpreting basic clinical microbiology procedures.

**MLT 216. Professional Issues. 1.0 Credit.** Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0

This course surveys professional issues in preparation for career entry. Emphasis is placed on work readiness and theoretical concepts in microbiology, immunohematology, hematology, and clinical chemistry. Upon completion, students should be able to demonstrate competence in career entry-level areas and be prepared for the national certification examination.



**MLT 220. Hematology/Hemostasis II. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0

This course covers the theories and techniques used in the advanced analysis of human blood cells and hemostasis. Emphasis is placed on the study of hematologic disorders, abnormal cell development and morphology, and related testing. Upon completion, students should be able to demonstrate a theoretical comprehension and application of abnormal hematology and normal and abnormal hemostasis.

Prerequisites: Take MLT 120 with a minimum grade of C

**MLT 230. Clinical Chemistry II. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0

This course is designed to supplement the biochemical and physiologic theory presented in MLT 130. Emphasis is placed on special chemistry techniques and methodologies. Upon completion, students should be able to recognize and differentiate technical and physiological causes of unexpected test results.

Prerequisites: Take MLT 130

**MLT 240. Special Clinical Microbiology. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0

This course is designed to introduce special techniques in clinical microbiology. Emphasis is placed on advanced areas in microbiology. Upon completion, students should be able to demonstrate theoretical comprehension in performing and interpreting specialized clinical microbiology procedures.

Prerequisites: Take MLT 140

**MLT 251. MLT Practicum I. 1.0 Credit.** Class-0.0. Clinical-3.0. Lab-0.0. Work-0.0

This course provides entry-level clinical laboratory experience. Emphasis is placed on technique, accuracy, and precision. Upon completion, students should be able to demonstrate entry-level competence on final clinical evaluations. MLT Practicum I.

Prerequisites: Take MLT 110 with a minimum grade of C

**MLT 267. MLT Practicum II. 8.0 Credits.** Class-0.0. Clinical-24.0. Lab-0.0. Work-0.0

This course provides entry-level clinical laboratory experience. Emphasis is placed on technique, accuracy, and precision. Upon completion, students should be able to demonstrate entry-level competence on final clinical evaluations.

**MLT 277. MLT Practicum III. 8.0 Credits.** Class-0.0. Clinical-24.0. Lab-0.0. Work-0.0

This course provides entry-level clinical laboratory experience. Emphasis is placed on technique, accuracy, and precision. Upon completion, students should be able to demonstrate entry-level competence on final clinical evaluations.

## Music (MUS)

**MUS 110. Music Appreciation. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course is a basic survey of the music of the Western world. Emphasis is placed on the elements of music, terminology, composers, form, and style within a historical perspective. Upon completion, students should be able to demonstrate skills in basic listening and understanding of the art of music.

**MUS 111. Fundamentals of Music. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course is an introductory course for students with little or no music background. Emphasis is placed on music notation, rhythmic patterns, scales, key signatures, intervals, and chords. Upon completion, students should be able to demonstrate an understanding of the rudiments of music.

**MUS 112. Introduction to Jazz. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course introduces the origins and musical components of jazz and the contributions of its major artists. Emphasis is placed on the development of discriminating listening habits, as well as the investigation of the styles and structural forms of the jazz idiom. Upon completion, students should be able to demonstrate skills in listening and understanding this form of American music. Students seeking to take this course to meet the college transfer humanities requirement may also take MUS 110 (no MUS prerequisites).

**MUS 121. Music Theory I. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course provides an introduction to the musical elements of melody, rhythm, and harmony. Emphasis is placed upon the interaction of these elements through fundamental analysis and an introduction to part writing. Upon completion, students should be able to demonstrate understanding of melodic voice leading, rhythmic functions within simple and compound meters, and simple harmonic progressions.

Prerequisites: Take MUS 111

**MUS 122. Music Theory II. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course provides a comprehensive study of diatonic harmony. Emphasis is placed on voice leading tasks, part writing, and analysis using various labeling systems. Upon completion, students should be able to demonstrate harmonic principles through four-voice part writing, recognize and label non-harmonic tones, analyze chords using Roman numerals, figured bass, and lead sheet symbols, and classify small-scale phrase structure and cadence types.

Prerequisites: Take MUS 121

**MUS 123. Music Composition. 1.0 Credit.** Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0

This course provides a study of elementary forms and traditional approaches to the organization of melody, harmony, rhythm, etc. in musical composition. Emphasis is placed on using musical notation to create new musical works.

Prerequisites: Take One: MUS 111 or MUS 121

**MUS 125. Aural Skills I. 1.0 Credit.** Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0

This course provides an introduction to the fundamentals in aural skills. Emphasis is placed on the study of basic melodies, harmonies, and rhythms through sight singing and ear training. Upon completion, students should be able to identify diatonic intervals, scales, and chords and perform and dictate simple melodies and rhythmic patterns.

**MUS 126. Aural Skills II. 1.0 Credit.** Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0

This course provides a foundation in aural skills. Emphasis is placed on the development of sight singing and ear training skills in diatonic melody, diatonic harmonic progression, and rhythmic patterns. Upon completion, students should be able to fluently read music in treble and bass clefs; utilize any solmization system while sight singing simple diatonic melodies; identify elementary diatonic chord progressions; perform rhythms in simple and compound meters; and dictate diatonic melodic, diatonic harmonic, and advanced rhythmic patterns.

Prerequisites: Take MUS 125

**MUS 131. Chorus I. 1.0 Credit.** Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0

This course provides an opportunity to gain experience singing in a chorus. Emphasis is placed on vocal techniques and the study and performance of a variety of styles and periods of choral literature. Upon completion, students should be able to demonstrate skills needed to participate in choral singing leading to performance.

**MUS 132. Chorus II. 1.0 Credit.** Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0

This course provides a continuation of studies begun in MUS 131. Emphasis is placed on vocal techniques and the study and performance of a variety of styles and periods of choral literature. Upon completion, students should be able to demonstrate skills needed to participate in choral singing leading to performance.

Prerequisites: Take MUS 131

**MUS 133. Band I. 1.0 Credit.** Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0

This course provides an opportunity for those who play a band instrument to gain experience playing in an ensemble. Emphasis is placed on band techniques and the study and performance of a variety of styles and periods of band literature. Upon completion, students should be able to demonstrate skills needed to participate in ensemble playing leading to performance. Audition is required.

**MUS 134. Band II. 1.0 Credit.** Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0

This course is a continuation of MUS 133. Emphasis is placed on band techniques and the study and performance of a variety of styles and periods of band literature. Upon completion, students should be able to demonstrate skills needed to participate in ensemble playing leading to performance.

Prerequisites: Take MUS 133

**MUS 135. Jazz Ensemble I. 1.0 Credit.** Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0

This course provides an opportunity for those who play an appropriate instrument to gain experience playing in a jazz ensemble. Emphasis is placed on jazz ensemble techniques and the study and performance of a variety of styles of jazz literature. Upon completion, students should be able to demonstrate skills needed to participate in ensemble playing leading to performance. This course provides the opportunity for development of jazz improvisational skills using chords related to 12-BAR blues and simple songs using 11-V-I progressions.

**MUS 136. Jazz Ensemble II. 1.0 Credit.** Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0

This course is a continuation of MUS 135. Emphasis is placed on jazz ensemble techniques and the study and performance of a variety of styles and periods of jazz literature. Upon completion, students should be able to demonstrate skills needed to participate in ensemble playing leading to performance. This course provides opportunities for learning to improvise over chord changes inherent in each jazz style studied.

Prerequisites: Take MUS 135

**MUS 137. Orchestra I. 1.0 Credit.** Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0

This course provides an opportunity for those who play an orchestral instrument to gain experience playing in an ensemble. Emphasis is placed on orchestral techniques and the study and performance of a variety of styles and periods of orchestral and string ensemble literature. Upon completion, students should be able to demonstrate skills needed to participate in ensemble playing leading to performance.

**MUS 138. Orchestra II. 1.0 Credit.** Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0

This course is a continuation of MUS 137. Emphasis is placed on orchestral techniques and the study and performance of a variety of styles and periods of orchestral and string ensemble literature. Upon completion, students should be able to demonstrate skills needed to participate in ensemble playing leading to performance.

Prerequisites: Take MUS 137

**MUS 141E. Ensemble I (early Music Consort I). 1.0 Credit.** Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0

This course provides an opportunity to perform in any combination of instrumental, vocal, or keyboard groups of two or more. Emphasis is placed on the development of performance skills and the study of a variety of styles and periods of ensemble literature. Upon completion, students should be able to demonstrate skills needed to participate in ensemble playing leading to performance. Mus 141E is Early Music Consort I.

**MUS 141G. Ensemble I (Guitar Ensemble I). 1.0 Credit.** Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0

This course provides an opportunity to perform in any combination of instrumental, vocal, or keyboard groups of two or more. Emphasis is placed on the development of performance skills and the study of a variety of styles and periods of ensemble literature. Upon completion, students should be able to demonstrate skills needed to participate in ensemble playing leading to performance. Mus 141G is Guitar Ensemble I. Corequisites: Take MUS 161

**MUS 141R. Ensemble I (Recorder Ensemble I). 1.0 Credit.** Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0

This course provides an opportunity to perform in any combination of instrumental, vocal, or keyboard groups of two or more. Emphasis is placed on the development of performance skills and the study of a variety of styles and periods of ensemble literature. Upon completion, students should be able to demonstrate skills needed to participate in ensemble playing leading to performance. Mus 141R is Recorder Ensemble I.

**MUS 141B. Ensemble I (baroque Music Consort I). 1.0 Credit.** Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0

This course provides an opportunity to perform in any combination of instrumental, vocal, or keyboard groups of two or more. Emphasis is placed on the development of performance skills and the study of a variety of styles and periods of ensemble literature. Upon completion, students should be able to demonstrate skills needed to participate in ensemble playing leading to performance. This course has been approved to satisfy the Comprehensive Articulation Agreement pre-major and/or elective course requirement. MUS 141B is Baroque Music Consort I; Audition required.

**MUS 141P. Ensemble I (Piano Ensemble I). 1.0 Credit.** Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0

This course provides an opportunity to perform in any combination of instrumental, vocal, or keyboard groups of two or more. Emphasis is placed on the development of performance skills and the study of a variety of styles and periods of ensemble literature. Upon completion, students should be able to demonstrate skills needed to participate in ensemble playing leading to performance.

**MUS 141. Ensemble I. 1.0 Credit.** Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0

This course provides an opportunity to perform in any combination of instrumental, vocal, or keyboard groups of two or more. Emphasis is placed on the development of performance skills and the study of a variety of styles and periods of ensemble literature. Upon completion, students should be able to demonstrate skills needed to participate in ensemble playing leading to performance.

**MUS 142E. Ensemble II (Early Music Consort II). 1.0 Credit.** Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0

This course is a continuation of Mus 141E. Emphasis is placed on the development of performance skills and the study of a variety of styles and periods of ensemble literature. Upon completion, students should be able to demonstrate skills needed to participate in ensemble playing leading to performance. Mus 142E is Early Music Consort II with the prerequisite of Mus 141E.

Prerequisites: Take MUS 141E

**MUS 142G. Ensemble II (Guitar Ensemble II). 1.0 Credit.** Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0

This course is a continuation of mus 141G. Emphasis is placed on the development of performance skills and the study of a variety of styles and periods of ensemble literature. Upon completion, students should be able to demonstrate skills needed to participate in ensemble playing leading to performance. Mus 142G is Guitar Ensemble II with the prerequisite of Mus 141G.

Prerequisites: Take MUS 141G

Corequisites: Take MUS 162

**MUS 142R. Ensemble II (Recorder Ensemble II). 1.0 Credit.** Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0

This course is a continuation of Mus 141R. Emphasis is placed on the development of performance skills and the study of a variety of styles and periods of ensemble literature. Upon completion, students should be able to demonstrate skills needed to participate in ensemble playing leading to performance. Mus 142R is Recorder Ensemble II with the prerequisite of Mus 141R.

Prerequisites: Take MUS 141R

**MUS 142B. Ensemble II (Baroque Ensemble). 1.0 Credit.** Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0

This course is a continuation of MUS 141. Emphasis is placed on the development of performance skills and the study of a variety of styles and periods of ensemble literature. Upon completion, students should be able to demonstrate skills needed to participate in ensemble playing leading to performance. This course has been approved to satisfy the Comprehensive Articulation Agreement pre-major and/or elective course requirement. This course is a continuation of MUS-141B; MUS-142B is Baroque Music Consort II.

Prerequisites: Take MUS 141B

**MUS 142P. Ensemble II (Piano Ensemble II). 1.0 Credit.** Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0

This course is a continuation of MUS 141. Emphasis is placed on the development of performance skills and the study of a variety of styles and periods of ensemble literature. Upon completion, students should be able to demonstrate skills needed to participate in ensemble playing leading to performance.

Prerequisites: Take MUS 141P

**MUS 142. Ensemble II. 1.0 Credit.** Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0

This course is a continuation of MUS 141. Emphasis is placed on the development of performance skills and the study of a variety of styles and periods of ensemble literature. Upon completion, students should be able to demonstrate skills needed to participate in ensemble playing leading to performance.

Prerequisites: Take MUS 141

**MUS 151L. Class Music I Vocal Repertoire I. 1.0 Credit.** Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0

This course provides group instruction in skills and techniques of the particular instrument or voice for those with little or no previous experience. Emphasis is placed on techniques and styles and the exploration and study of appropriate literature. Upon completion, students should be able to demonstrate proficiency in the studied skills and repertoire through performance. This course has been approved to satisfy the Comprehensive Articulation Agreement pre-major and/or elective course requirement. This course provides an opportunity to perform vocal music from western classical common practice vocal literature.

**MUS 151I. Class Music I Instrumental Rep 1. 1.0 Credit.** Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0

This course provides group instruction in skills and techniques of the particular instrument or voice for those with little or no previous experience. Emphasis is placed on techniques and styles and the exploration and study of appropriate literature. Upon completion, students should be able to demonstrate proficiency in the studied skills and repertoire through performance. This course has been approved to satisfy the Comprehensive Articulation Agreement pre-major and/or elective course requirement. This course will focus on preparation and performance presentation.

**MUS 151X. Class Music I (repertoire). 1.0 Credit.** Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0

This course provides group instruction in skills and techniques of the particular instrument or voice for those with little or no previous experience. Emphasis is placed on techniques and styles and the exploration and study of appropriate literature. Upon completion, students should be able to demonstrate proficiency in the studied skills and repertoire through performance. This course will focus on learning to work as an accompanying pianists with both vocalist and instrumentalists in a collaborative setting.

**MUS 151E. Class Music I. 1.0 Credit.** Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0

This course provides group instruction in skills and techniques of the particular instrument or voice for those with little or no previous experience. Emphasis is placed on techniques and styles and the exploration and study of appropriate literature. Upon completion, students should be able to demonstrate proficiency in the studied skills and repertoire through performance. This course prepares students for applied private study; Audition required.

**MUS 151G. Class Music I (Beginning Guitar). 1.0 Credit.** Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0

This course provides group instruction in skills and techniques of the particular instrument or voice for those with little or no previous experience. Emphasis is placed on techniques and styles and the exploration and study of appropriate literature. Upon completion, students should be able to demonstrate proficiency in the studied skills and repertoire through performance. MUS-151G is Beginning Guitar in which focus is on reading guitar music in first position, playing chords in first position, and transportation to selected keys.

**MUS 151J. Class Music I (Jazz Vocal). 1.0 Credit.** Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0

This course provides group instruction in skills and techniques of the particular instrument or voice for those with little or no previous experience. Emphasis is placed on techniques and styles and the exploration and study of appropriate literature. Upon completion, students should be able to demonstrate proficiency in the studied skills and repertoire through performance. MUS-151J is Jazz Vocal which will include singing solos as well as scat singing and modern 4-PART harmony.

**MUS 151P. Class Music I (Piano I). 1.0 Credit.** Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0

This course provides group instruction in skills and techniques of the particular instrument or voice for those with little or no previous experience. Emphasis is placed on techniques and styles and the exploration and study of appropriate literature. Upon completion, students should be able to demonstrate proficiency in the studied skills and repertoire through performance. MUS151P is Beginning Piano in which students learn music reading skills required for simple two-hand piano compositions in the keys of C and G major.

**MUS 151T. Class Music I. 1.0 Credit.** Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0

This course provides group instruction in skills and techniques of the particular instrument or voice for those with little or no previous experience. Emphasis is placed on techniques and styles and the exploration and study of appropriate literature. Upon completion, students should be able to demonstrate proficiency in the studied skills and repertoire through performance. MUS151T is Theory Ear Training Transfer Prep & Review.

**MUS 151V. Class Music I (Voice I). 1.0 Credit.** Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0

This course provides group instruction in skills and techniques of the particular instrument or voice for those with little or no previous experience. Emphasis is placed on techniques and styles and the exploration and study of appropriate literature. Upon completion, students should be able to demonstrate proficiency in the studied skills and repertoire through performance. MUS151V is Class Vocal I for beginning singers and will focus on correct posture, breathing, support for the resonation vowels, and proper diction.

**MUS 151W. Class Music I. 1.0 Credit.** Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0

This course provides group instruction in skills and techniques of the particular instrument or voice for those with little or no previous experience. Emphasis is placed on techniques and styles and the exploration and study of appropriate literature. Upon completion, students should be able to demonstrate proficiency in the studied skills and repertoire through performance. This course provided an opportunity to learn the International Phonetic Alphabet (IPA) needed to sign vocal music from western classical common practice vocal literature (English & Italian).

**MUS 151. Class Music I. 1.0 Credit.** Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0

This course provides group instruction in skills and techniques of the particular instrument or voice for those with little or no previous experience. Emphasis is placed on techniques and styles and the exploration and study of appropriate literature. Upon completion, students should be able to demonstrate proficiency in the studied skills and repertoire through performance.

Corequisites: Take MUS 161

**MUS 152P. Class Music II (Piano II). 1.0 Credit.** Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0

This course is a continuation of Mus 151P. Emphasis is placed on techniques and styles and the exploration and study of appropriate literature. Upon completion, students should be able to demonstrate proficiency in the studied skills and repertoire through performance. Mus 152P is Piano II in which piano compositions, scales, and chords studied will include the keys of c, g and f major, and a and d minor.

Prerequisites: Take MUS 151P

**MUS 152V. Class Music II (Voice II). 1.0 Credit.** Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0

This course is a continuation of mus 151V. Emphasis is placed on techniques and styles and the exploration and study of appropriate literature. Upon completion, students should be able to demonstrate proficiency in the studied skills and repertoire through performance. Mus 152V is Class Voice II in which study of the international phonetic alphabet will facilitate the performance of repertoire which will include art songs, arias, and other songs with the prerequisite of Mus 151V.

Prerequisites: Take MUS 151V

**MUS 152W. Class Music II Intro to Vocal Diction II. 1.0 Credit.** Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0

This course is a continuation of MUS 151. Emphasis is placed on techniques and styles and the exploration and study of appropriate literature. Upon completion, students should be able to demonstrate proficiency in the studied skills and repertoire through performance. This course has been approved to satisfy the Comprehensive Articulation Agreement pre-major and/or elective course requirement. This course provides an opportunity to learn the vocal music from western classical common practice vocal literature (French & German).

Prerequisites: Take MUS 151W

**MUS 152L. Class Music II Vocal Repertoire II. 1.0 Credit.** Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0

This course is a continuation of MUS 151. Emphasis is placed on techniques and styles and the exploration and study of appropriate literature. Upon completion, students should be able to demonstrate proficiency in the studied skills and repertoire through performance. This course has been approved to satisfy the Comprehensive Articulation Agreement pre-major and/or elective course requirement. This course provides an opportunity to perform vocal music from western classical common practice vocal literature.

Prerequisites: Take MUS 151L

**MUS 152I. Class Music II Instrumental Repertoire I. 1.0 Credit.** Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0

This course is a continuation of MUS 151. Emphasis is placed on techniques and styles and the exploration and study of appropriate literature. Upon completion, students should be able to demonstrate proficiency in the studied skills and repertoire through performance. This course has been approved to satisfy the Comprehensive Articulation Agreement pre-major and/or elective course requirement.

Prerequisites: Take MUS 151I



**MUS 152X. Class Music II Piano Repertoire 2. 1.0 Credit.** Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0

This course is a continuation of MUS 151. Emphasis is placed on techniques and styles and the exploration and study of appropriate literature. Upon completion, students should be able to demonstrate proficiency in the studied skills and repertoire through performance. Piano Repertoire 2.

Prerequisites: Take MUS 151X

**MUS 152G. Class Music II (Intermediate Guitar). 1.0 Credit.** Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0

This course is a continuation of MUS 151. Emphasis is placed on techniques and styles and the exploration and study of appropriate literature. Upon completion, students should be able to demonstrate proficiency in the studied skills and repertoire through performance.

Prerequisites: Take MUS 151G

**MUS 152. Class Music II. 1.0 Credit.** Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0

This course is a continuation of MUS 151. Emphasis is placed on techniques and styles and the exploration and study of appropriate literature. Upon completion, students should be able to demonstrate proficiency in the studied skills and repertoire through performance.

Prerequisites: Take MUS 151

Corequisites: Take MUS 162

**MUS 161. Applied Music I. 2.0 Credits.** Class-1.0. Clinical-0.0. Lab-2.0. Work-0.0

This course provides individual instruction in the skills and techniques of the particular instrument or voice. Emphasis is placed on techniques and styles and the exploration and study of appropriate literature. Upon completion, students should be able to demonstrate proficiency in the studied skills and repertoire through performance.

**MUS 162. Applied Music II. 2.0 Credits.** Class-1.0. Clinical-0.0. Lab-2.0. Work-0.0

This course is a continuation of MUS 161. Emphasis is placed on techniques and styles and the exploration and study of appropriate literature. Upon completion, students should be able to demonstrate proficiency in the studied skills and repertoire through performance.

Prerequisites: Take MUS 161

**MUS 173. Opera Production I. 3.0 Credits.** Class-0.0. Clinical-0.0. Lab-9.0. Work-0.0

This course provides an applied laboratory study of the processes involved in the production of an opera. Topics include fundamental practices, principles, and techniques associated with producing operas of various musical periods with an emphasis on vocal technique. Upon completion, students should be able to participate in an assigned position in a college opera production.

**MUS 174. Opera Production II. 3.0 Credits.** Class-0.0. Clinical-0.0. Lab-9.0. Work-0.0

This course provides an applied laboratory study of the processes involved in the production of an opera. Topics include fundamental practices, principles, and techniques associated with producing operas of various musical periods with an emphasis on musical/language production. Upon completion, students should be able to participate in an assigned position in a college opera production.

Prerequisites: Take MUS 173

**MUS 210. History of Rock Music. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course is a survey of Rock music from the early 1950's to the present. Emphasis is placed on musical groups, soloists, and styles related to the evolution of this idiom and on related historical and social events. Upon completion, students should be able to identify specific styles and to explain the influence of selected performers within their respective eras.

**MUS 213. Opera and Musical Theatre. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course covers the origins and development of opera and musical theatre from the works of Claudio Monteverdi to the present. Emphasis is placed on how the structure and components of opera and musicals effect dramaturgy through listening examples and analysis. Upon completion, students should be able to demonstrate analytical and listening skills in understanding both opera and the musical.

**MUS 221. Music Theory III. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course provides a comprehensive study of chromatic harmony. Emphasis is placed on advanced voice leading tasks, part writing, and analysis of chord progressions, modulations, and large-scale forms. Upon completion, students should be able to identify, notate, and analyze an array of chromatic chords, recognize the function and movement of chromatic harmonies, identify modulatory procedures, analyze formal structures including, but not limited to, binary, ternary, sonata, and rondo.

Prerequisites: Take MUS 122

Corequisites: Take MUS 271

**MUS 222. Music Theory IV. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course provides an advanced study of chromatic harmony, scale systems, and an introduction to twentieth-century music. Emphasis is placed on advanced part writing and analysis of chromatic harmony and basic twentieth-century compositional and analytical techniques. Upon completion, students should be able to analyze complex chord progressions, advanced modulations, and elemental serial procedures; build an array of synthetic scales; and identify characteristics of twentieth-century topics including, but not limited to, atonality, serialism, minimalism, indeterminacy, and electronic music.

Prerequisites: Take MUS 221

Corequisites: Take MUS 272

**MUS 225. Aural Skills III. 1.0 Credit.** Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0

This course provides advanced aural skills training in diatonicism and basic aural skills training in chromaticism. Emphasis is placed on the development of sight singing and ear training skills in complex rhythmic patterns, diatonic melodies and harmonies, and basic chromaticism. Upon completion, students should be able to utilize any solmization system while sight singing diatonic melodies with functional and non-functional chromaticism, fluently read music in multiple clefs in addition to treble and bass, identify modulations, perform complex rhythmic patterns in various meters, and dictate tonal melodies and harmonies including chromaticism.

Prerequisites: Take MUS 126

**MUS 226. Aural Skills IV. 1.0 Credit.** Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0

This course provides advanced aural skills training in diatonicism and chromaticism. Emphasis is placed on the development of sight singing and ear training skills in chromatic melodies, chromatic harmonies, and complex rhythmic patterns. Upon completion, students should be able to utilize any solmization system while sight singing melodies containing significant chromaticism; fluently read music in multiple clefs, including treble, bass, alto, and tenor; perform and dictate rhythmic patterns in irregular and changing meters; and dictate diatonic and chromatic melodies and harmonic progressions.

Prerequisites: Take MUS 225

**MUS 231. Chorus III. 1.0 Credit.** Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0

This course is a continuation of MUS 132. Emphasis is placed on vocal techniques and the study and performance of a variety of styles and periods of choral literature. Upon completion, students should be able to demonstrate skills needed to participate in choral singing leading to performance.

Prerequisites: Take MUS 132

**MUS 232. Chorus IV. 1.0 Credit.** Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0

This course is a continuation of MUS 231. Emphasis is placed on vocal techniques and the study of styles and periods of choral literature. Upon completion, students should be able to demonstrate skills needed to participate in choral singing leading to performance.

Prerequisites: Take MUS 231

**MUS 233. Band III. 1.0 Credit.** Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0

This course is a continuation of MUS 134. Emphasis is placed on band techniques and the study and performance of a variety of styles and periods of band literature. Upon completion, students should be able to demonstrate skills needed to participate in ensemble playing leading to performance.

Prerequisites: Take MUS 134

**MUS 234. Band IV. 1.0 Credit.** Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0

This course is a continuation of MUS 233. Emphasis is placed on band techniques and the study and performance of a variety of styles and periods of band literature. Upon completion, students should be able to demonstrate skills needed to participate in ensemble playing leading to performance.

Prerequisites: Take MUS 233

**MUS 235. Jazz Ensemble III. 1.0 Credit.** Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0

This course is a continuation of MUS 136. Emphasis is placed on jazz ensemble techniques and the study and performance of a variety of styles and periods of jazz literature. Upon completion, students should be able to demonstrate skills needed to participate in ensemble playing leading to performance.

Prerequisites: Take MUS 136

**MUS 236. Jazz Ensemble IV. 1.0 Credit.** Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0

This course is a continuation of MUS 235. Emphasis is placed on jazz ensemble techniques and the study and performance of a variety of styles and periods of jazz literature. Upon completion, students should be able to demonstrate skills needed to participate in ensemble playing leading to performance.

Prerequisites: Take MUS 235

**MUS 237. Orchestra III. 1.0 Credit.** Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0

This course is a continuation of MUS 138. Emphasis is placed on orchestral techniques and the study and performance of a variety of styles and periods of orchestral and string ensemble literature. Upon completion, students should be able to demonstrate skills needed to participate in ensemble playing leading to performance.

Prerequisites: Take MUS 138

**MUS 238. Orchestra IV. 1.0 Credit.** Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0

This course is a continuation of MUS 237. Emphasis is placed on orchestral techniques and the study and performance of a variety of styles and periods of orchestral and string ensemble literature. Upon completion, students should be able to demonstrate skills needed to participate in ensemble playing leading to performance.

Prerequisites: Take MUS 237

**MUS 241B. Ensemble III. 1.0 Credit.** Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0

This course is a continuation of MUS 142. Emphasis is placed on the development of performance skills and the study of a variety of styles and periods of ensemble literature. Upon completion, students should be able to demonstrate skills needed to participate in ensemble playing leading to performance.

Prerequisites: Take MUS 142

**MUS 241D. Ensemble III (Appalachian Dulcimer). 1.0 Credit.** Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0

This course is a continuation of MUS 142. Emphasis is placed on the development of performance skills and the study of a variety of styles and periods of ensemble literature. Upon completion, students should be able to demonstrate skills needed to participate in ensemble playing leading to performance. MUS 241D is Appalachian Dulcimer Ensemble III.

Prerequisites: Take MUS 142D

**MUS 241E. Ensemble III (Early Music Consort III). 1.0 Credit.**

Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0

This course is a continuation of MUS 142. Emphasis is placed on the development of performance skills and the study of a variety of styles and periods of ensemble literature. Upon completion, students should be able to demonstrate skills needed to participate in ensemble playing leading to performance. This course is a continuation of MUS 142E.

Prerequisites: Take MUS 142E

**MUS 241P. Ensemble III (Piano Ensemble III). 1.0 Credit.** Class-0.0.

Clinical-0.0. Lab-2.0. Work-0.0

This course is a continuation of MUS 142. Emphasis is placed on the development of performance skills and the study of a variety of styles and periods of ensemble literature. Upon completion, students should be able to demonstrate skills needed to participate in ensemble playing leading to performance. This course is a continuation of MUS 142P.

Prerequisites: Take MUS 142P

**MUS 241. Ensemble III. 1.0 Credit.** Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0

This course is a continuation of MUS 142. Emphasis is placed on the development of performance skills and the study of a variety of styles and periods of ensemble literature. Upon completion, students should be able to demonstrate skills needed to participate in ensemble playing leading to performance.

Prerequisites: Take MUS 142

**MUS 242P. Ensemble IV (Piano Ensemble IV). 1.0 Credit.** Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0

This course is a continuation of Mus 241. Emphasis is placed on the development of performance skills and the study of styles of ensemble literature. Upon completion, students should be able to demonstrate skills needed to participate in ensemble playing leading to performance. Mus 242P is Piano Ensemble IV with the prerequisite of Mus 241P.

Prerequisites: Take MUS 241P

**MUS 242G. Ensemble IV (Guitar Ensemble IV). 1.0 Credit.** Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0

This course is a continuation of MUS 241. Emphasis is placed on the development of performance skills and the study of styles of ensemble literature. Upon completion, students should be able to demonstrate skills needed to participate in ensemble playing leading to performance. This course is a continuation of MUS 241G.

Prerequisites: Take MUS 241G

**MUS 242. Ensemble IV. 1.0 Credit.** Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0

This course is a continuation of MUS 241. Emphasis is placed on the development of performance skills and the study of styles of ensemble literature. Upon completion, students should be able to demonstrate skills needed to participate in ensemble playing leading to performance.

Prerequisites: Take MUS 241

**MUS 251P. Class Music III (piano Iii). 1.0 Credit.** Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0

This course is a continuation of Mus 152P. Emphasis is placed on techniques and styles and the exploration and study of appropriate literature. Upon completion, students should be able to demonstrate proficiency in the studied skills and repertoire through performance. Mus 251P is Class Piano III in an electronic piano laboratory setting with the prerequisite of Mus 152P.

Prerequisites: Take MUS 152P

**MUS 251I. Class Music III (Instrumental Rep). 1.0 Credit.** Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0

This course is a continuation of MUS 152. Emphasis is placed on techniques and styles and the exploration and study of appropriate literature. Upon completion, students should be able to demonstrate proficiency in the studied skills and repertoire through performance.

Prerequisites: Take MUS 152

**MUS 251S. Class Music III (Accmpnaying). 1.0 Credit.** Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0

This course is a continuation of MUS 152. Emphasis is placed on techniques and styles and the exploration and study of appropriate literature. Upon completion, students should be able to demonstrate proficiency in the studied skills and repertoire through performance.

Prerequisites: Take MUS 152

**MUS 251V. Class Music III (Voice). 1.0 Credit.** Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0

This course is a continuation of MUS 152. Emphasis is placed on techniques and styles and the exploration and study of appropriate literature. Upon completion, students should be able to demonstrate proficiency in the studied skills and repertoire through performance. This course is a continuation of MUS 152V.

Prerequisites: Take MUS 152V

**MUS 251. Class Music III. 1.0 Credit.** Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0

This course is a continuation of MUS 152. Emphasis is placed on techniques and styles and the exploration and study of appropriate literature. Upon completion, students should be able to demonstrate proficiency in the studied skills and repertoire through performance.

Prerequisites: Take MUS 152

**MUS 252P. Class Music IV (piano Iv). 1.0 Credit.** Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0

This course is a continuation of mus 251. Emphasis is placed on techniques and styles and the exploration and study of appropriate literature. Upon completion, students should be able to demonstrate proficiency in the studied skills and repertoire through performance. Mus 252P is Class piano IV i an electronic piano laboratory setting with the prerequisite of Mus 251P.

Prerequisites: Take MUS 251P

**MUS 252G. Class Music IV (Jazz Guitar). 1.0 Credit.** Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0

This course is a continuation of MUS 251. Emphasis is placed on techniques and styles and the exploration and study of appropriate literature. Upon completion, students should be able to demonstrate proficiency in the studied skills and repertoire through performance.

Prerequisites: Take MUS 251

**MUS 252I. Class Music IV (Instrumental Rep). 1.0 Credit.** Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0

This course is a continuation of MUS 251. Emphasis is placed on techniques and styles and the exploration and study of appropriate literature. Upon completion, students should be able to demonstrate proficiency in the studied skills and repertoire through performance.

Prerequisites: Take MUS 251I

**MUS 252J. Class Music IV (Jazz Piano. 1.0 Credit.** Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0

This course is a continuation of MUS 251. Emphasis is placed on techniques and styles and the exploration and study of appropriate literature. Upon completion, students should be able to demonstrate proficiency in the studied skills and repertoire through performance. MUS252J is Jazz Piano which explores the application of both simple and complex chord forms in re-harmonizing standard popular tunes with the prerequisite of MUS251C.

Prerequisites: Take MUS 251

**MUS 252V. Class Music IV (Voice). 1.0 Credit.** Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0

This course is a continuation of MUS 251. Emphasis is placed on techniques and styles and the exploration and study of appropriate literature. Upon completion, students should be able to demonstrate proficiency in the studied skills and repertoire through performance.

Prerequisites: Take MUS 251V

**MUS 252. Class Music IV. 1.0 Credit.** Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0

This course is a continuation of MUS 251. Emphasis is placed on techniques and styles and the exploration and study of appropriate literature. Upon completion, students should be able to demonstrate proficiency in the studied skills and repertoire through performance.

Prerequisites: Take MUS 251

**MUS 253. Big Band. 1.0 Credit.** Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0  
This course includes the Big Band instrumentation of five saxes, four trumpets, four trombones, and four-piece rhythm section (bass, piano, drums, and guitar). Emphasis is placed on learning the repertoire specifically written for Big Band instrumentation. Upon completion, students should be able to demonstrate skills needed to participate in performance of Big Band music.

**MUS 261. Applied Music III. 2.0 Credits.** Class-1.0. Clinical-0.0. Lab-2.0. Work-0.0  
This course is a continuation of MUS 162. Emphasis is placed on techniques and styles and the exploration and study of appropriate literature. Upon completion, students should be able to demonstrate proficiency in the studied skills and repertoire through performance.  
Prerequisites: Take MUS 162

**MUS 262. Applied Music IV. 2.0 Credits.** Class-1.0. Clinical-0.0. Lab-2.0. Work-0.0  
This course is a continuation of MUS 261. Emphasis is placed on techniques and styles and the exploration and study of appropriate literature. Upon completion, students should be able to demonstrate proficiency in the studied skills and repertoire through performance.  
Prerequisites: Take MUS 261

**MUS 265. Piano Pedagogy. 1.0 Credit.** Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0  
This course introduces the basic methods and materials of piano instruction. Emphasis is placed on basic teaching techniques and piano literature appropriate for various skill levels. Upon completion, students should be able to identify and utilize appropriate teaching methods and materials for various levels of piano instruction.

**MUS 271. Music History I. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0  
This course is the first of a two-semester, in-depth study of music history. Emphasis is placed on the history and literature of music from Antiquity through the Baroque Period. Upon completion, students should be able to trace important musical developments and demonstrate an understanding of the composers' styles.  
Prerequisites: Take MUS 122

**MUS 272. Music History II. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0  
This course is the second of a two-semester, in-depth study of music history. Emphasis is placed on the history and literature of music from the Classical Period to the present. Upon completion, students should be able to trace important musical developments and demonstrate an understanding of the composers' styles.  
Prerequisites: Take MUS 271

**MUS 273. Opera Production III. 3.0 Credits.** Class-0.0. Clinical-0.0. Lab-9.0. Work-0.0  
This course provides an applied laboratory study of the processes involved in the production of an opera. Topics include fundamental practices, principles, and techniques associated with producing operas of various musical periods with an emphasis on stagecraft. Upon completion, students should be able to participate in an assigned position in a college opera production.  
Prerequisites: Take MUS 174

**MUS 274. Opera Production IV. 3.0 Credits.** Class-0.0. Clinical-0.0. Lab-9.0. Work-0.0  
This course provides an applied laboratory study of the processes involved in the production of an opera. Topics include fundamental practices, principles, and techniques associated with producing operas of various musical periods with an emphasis on rehearsal and performance techniques. Upon completion, students should be able to participate in an assigned position in a college opera production.  
Prerequisites: Take MUS 273

## Network Operating Systems (NOS)

**NOS 120. Linux/UNIX Single User. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0  
This course develops the necessary skills for students to develop both GUI and command line skills for using and customizing a Linux workstation. Topics include Linux file system and access permissions, GNOME Interface, VI editor, X Window System expression pattern matching, I/O redirection, network and printing utilities. Upon completion, students should be able to customize and use Linux systems for command line requirements and desktop productivity roles.

**NOS 130. Windows Single User. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0  
This course introduces operating system concepts for single-user systems. Topics include hardware management, file and memory management, system configuration/optimization, and utilities. Upon completion, students should be able to perform operating systems functions at the support level in a single-user environment.

**NOS 220. Linux/Unix Administration I. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0  
This course introduces the Linux file system, group administration, and system hardware controls. Topics include installation, creation and maintaining file systems, NIS client and DHCP client configuration, NFS, SMB/Samba, Configure X, Gnome, KDE, basic memory, processes, and security. Upon completion, students should be able to perform system administration tasks including installation, configuring and attaching a new Linux workstation to an existing network.  
Prerequisites: Take NOS 120

**NOS 221. Linux/UNIX Administration II. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0  
This course includes skill building in configuring common network services and security administration using Linux. Topics include server-side setup, configuration, basic administration of common networking services, and security administration using Linux. Upon completion, students should be able to setup a Linux server and configure common network services including security requirements.  
Prerequisites: Take NOS 220

**NOS 230. Windows Administration I. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0  
This course covers the installation and configuration of a Windows Server operating system. Emphasis is placed on the basic configuration of core network services, Active Directory and group policies. Upon completion, students should be able to install and configure a Windows Server operating system.  
Prerequisites: Take NOS 130 Minimum grade C



**NOS 231. Windows Administration II. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0

This course covers the management of a Windows Server operating system. Emphasis is placed on the deployment of print services, network services, Active Directory, group policies and access controls. Upon completion, students should be able to deploy and manage services on a Windows Server operating system.

Prerequisites: Take NOS 230 Minimum grade C

**NOS 232. Windows Administration III. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0

This course covers management and configuration of a highly available Windows Server operating system. Emphasis is placed on the implementation of business continuity and disaster recovery procedures for network services and access controls. Upon completion, students should be able to manage and configure a highly available Windows Server operating system.

Prerequisites: Take NOS 231 Minimum grade C

## Networking Technology (NET)

**NET 110. Networking Concepts. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0

This course introduces students to the networking field. Topics include network terminology and protocols, local-area networks, wide-area networks, OSI model, cabling, router programming, Ethernet, IP addressing, and network standards. Upon completion, students should be able to perform tasks related to networking mathematics, terminology, and models, media, Ethernet, subnetting, and TCP/IP Protocols.

**NET 125. Introduction to Networks. 3.0 Credits.** Class-1.0. Clinical-0.0. Lab-4.0. Work-0.0

This course introduces the architecture, structure, functions, components, and models of the Internet and computer networks. Topics include introduction to the principles of IP addressing and fundamentals of Ethernet concepts, media, and operations. Upon completion, students should be able to build simple LANs, perform basic configurations for routers and switches, and implement IP addressing schemes.

**NET 126. Routing Basics. 3.0 Credits.** Class-1.0. Clinical-0.0. Lab-4.0. Work-0.0

This course focuses on initial router configuration, router software management, routing protocol configuration, TCP/IP, and access control lists (ACLs). Emphasis will be placed on the fundamentals of router configuration, managing router software, routing protocol, and access lists. Upon completion, students should have an understanding of routers and their role in WANs, router configuration, routing protocols, TCP/IP, troubleshooting, and ACLs.

Prerequisites: Take NET 125 Minimum grade C

**NET 175. Wireless Technology. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0

This course introduces the student to wireless technology and interoperability with different communication protocols. Topics include Wireless Application Protocol (WAP), Wireless Mark-up language (WML), link manager, service discovery protocol, transport layer and frequency band. Upon completion, students should be able to discuss in written and oral form protocols and procedures required for different wireless applications.

**NET 225. Routing & Switching I. 3.0 Credits.** Class-1.0. Clinical-0.0. Lab-4.0. Work-0.0

This course focuses on advanced IP addressing techniques, intermediate routing protocols, command-line interface configuration of switches, Ethernet switching, VLANs, STP, and VTP. Emphasis will be placed on application and demonstration of skills acquired in pre-requisite courses. Upon completion, students should be able to perform tasks related to VLSM, routing protocols, switching concepts and configuration, STP, VLANs, and VTP.

Prerequisites: Take NET 126 Minimum grade C

**NET 226. Routing and Switching II. 3.0 Credits.** Class-1.0. Clinical-0.0. Lab-4.0. Work-0.0

This course introduces WAN theory and design, WAN technology, PPP, Frame Relay, ISDN, and additional case studies. Topics include network congestion problems, TCP/IP transport and network layer protocols, advanced routing and switching configuration, ISDN protocols, PPP encapsulation operations on a router. Upon completion, students should be able to provide solutions for network routing problems, identify ISDN protocols, and describe the Spanning Tree protocol.

Prerequisites: Take NET 225 Minimum grade C

**NET 289. Networking Project. 3.0 Credits.** Class-1.0. Clinical-0.0. Lab-4.0. Work-0.0

This course provides an opportunity to complete a significant networking project from the design phase through implementation with minimal instructor support. Emphasis is placed on project definition, documentation, installation, testing, presentation, and training. Upon completion, students should be able to complete a project from the definition phase through implementation.

Prerequisites: Take CTI 110, CTI 120, CTS 115, NET 226, and NOS 231 with a minimum grade of C

## Nondestructive Examination (NDE)

**NDE 110. Intro to Nondestructive Examination. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course introduces Nondestructive Examination (NDE) and its benefits, and provides a survey of the basic NDE methods and their limitations and advantages. Topics include terms and definitions associated with NDE, the basic approach to the nondestructive form of testing, and examples of industrial applications. Upon completion, students should be able to demonstrate a basic understanding of the major NDE methods and their applications.

**NDE 111. NDE Codes and Specifications. 2.0 Credits.** Class-1.0. Clinical-0.0. Lab-2.0. Work-0.0

This course is designed to instruct the student in the correct reading and interpretation of industrial codes and procedures that are common to the nondestructive examination industry. Topics include American Society of Mechanical Engineers (ASME), American Welding Society (AWS), Naval Air Systems Command (NAVAIR), American Society for Testing and Materials (ASTM) codes and various industry procedures to familiarize the student with wording, structure, and meaning of governing documents that must be followed. Upon completion, students should be able to find relevant sections of the code pertaining to the job, correctly interpret information given, differentiate between required and nonmandatory variables, and apply the information to their job assignment.

**NDE 112. Materials and Processes. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course introduces the student to materials, processing discontinuities, design parameters, metrology, and spatial relationships of industrial components. Topics include steel making, the nature of materials, inherent and processing discontinuities, elementary metallurgy, and the understanding of drawings. Upon completion, students should be able to demonstrate an understanding of how metals are formed, associated discontinuities, and how processing and geometric factors affect NDE results.

**NDE 121. Principles of Ultrasonic Examination-UT Level I. 4.0 Credits.** Class-3.0. Clinical-0.0. Lab-3.0. Work-0.0

This course introduces the student to basic principles associated with ultrasound and provides the initial elements of ASNT's SNT-TC-1A Level I, requirements for UT practitioners. Topics include sound wave modes and sound theory, and display modes are discussed and demonstrated through lab applications. Upon completion, students should be able to demonstrate a basic understanding of ultrasonics, select proper equipment, and set-up an instrument for straight beam examinations.

Prerequisites: Take one from each set:

- NDE 110
- MAT 121, MAT 171, MAT 172, or MAT 271

Corequisites: Complete one of the following options: Take PHY 110 PHY 110A

Take PHY 121 PHY 122 PHY 131 PHY 132 PHY 133 or PHY 151

**NDE 122. Angle Beam Examination. 4.0 Credits.** Class-3.0. Clinical-0.0. Lab-3.0. Work-0.0

This course introduces the student to the principles associated with transverse wave examination. Topics include shear wave discontinuity location, effects of shear waves in various materials, and inspection of components. Upon completion, students should be able to select and calibrate transverse wave equipment and the equipment for shear wave inspection, using inspection procedures.

Prerequisites: Take NDE 121

**NDE 131. Radiation Safety & Principles of Rt. 4.0 Credits.** Class-2.0. Clinical-0.0. Lab-4.0. Work-0.0

This course introduces basics principles of radiation safety, and the limitations and advantages of the radiographic testing (RT) method. Emphasis is placed on radiation safety, interaction of radiation with matter, radiation monitoring, radiographic physics, radiographic technique, and basic RT equipment. Upon completion, students should be able to demonstrate a basic understanding of radiation safety and the operating principles of RT.

Prerequisites: Take All: NDE 110, NDE 112, and MAT 121

Corequisites: Take PHY 131

**NDE 132. RT Industrial Applications. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0

This course covers advanced radiographic applications and the ASNT SNT-TC-1A Level II qualification program. Emphasis is placed on darkroom processing, image quality, geometric issues, and exposure calculations. Upon completion, the student should be able to select a proper radiographic technique and film to perform acceptable radiography to specific codes and standards.

Prerequisites: Take NDE 131

**NDE 142. Visual Testing-1,2. 2.0 Credits.** Class-1.0. Clinical-0.0. Lab-2.0. Work-0.0

This course describes the principles, limitations, and advantages of non-destructive examination (NDE) visual testing as it's applied to industrial components such as pipes, pumps, valves, hangers and supports. Emphasis is placed on visual testing techniques including the use of visual aids and measuring gages. Upon completion, students should be able to demonstrate a basic understanding of NDE visual techniques and their applications.

**NDE 143. Liquid Penetrant Testing-1,2. 2.0 Credits.** Class-1.0. Clinical-0.0. Lab-2.0. Work-0.0

This course describes the principles, limitations, and advantages of non-destructive examination (NDE) liquid penetrant testing as it's applied to industrial components such as pipes, pumps, valves, hangers and supports. Emphasis is placed on liquid penetrant testing techniques including the use of color contrast solvent removable and water washable penetrant techniques. Upon completion, students should be able to demonstrate a basic understanding of various NDE liquid penetrant techniques and their applications.

**NDE 152. Magnetic Particle Testing-1,2. 2.0 Credits.** Class-1.0. Clinical-0.0. Lab-2.0. Work-0.0

This course describes the principles, limitations, and advantages of non-destructive examination (NDE) magnetic particle testing as it's applied to industrial components such as pipes, pumps, valves, hangers and supports. Emphasis is placed on magnetic particle testing techniques including dry and wet fluorescent particle techniques. Upon completion, students should be able to demonstrate a basic understanding of NDE magnetic particle techniques and their applications.

**NDE 153. Eddy Current Testing-1. 4.0 Credits.** Class-3.0. Clinical-0.0. Lab-3.0. Work-0.0

This course describes the principles, limitations, and advantages of non-destructive examination (NDE) eddy current testing as it's applied to industrial components such as pipes, pumps, valves, hangers and supports. Emphasis is placed on eddy current testing techniques including the use of different types of eddy current equipment. Upon completion, students should be able to demonstrate a basic understanding of NDE eddy current techniques and their applications.

Prerequisites: Take NDE 110

**NDE 210. NDE Procedure Development. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0

This course provides an understanding of codes and procedure qualifications as they relate to various testing methods. Emphasis is placed on writing NDE procedures in accordance with various codes and standards. Upon completion, students should be able to demonstrate a basic understanding of code requirements for procedures and how to write field applicable NDE procedures.

Prerequisites: Take All: NDE 122 and NDE 132

**NDE 221. UT Industrial Applications. 4.0 Credits.** Class-3.0. Clinical-0.0. Lab-3.0. Work-0.0

This course exposes the student to practical application of straight and angle beam techniques on actual component mock-ups and introduces automated equipment. Lab applications provide comprehensive inspection challenges and "blind" samples. Upon completion, students should be able to follow procedures to fully inspect a variety of components to differing code requirements.

Prerequisites: Take NDE 122

**NDE 222. Advanced Ultrasonic Testing Including Phased Array. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0

This course introduces the student to principles of flaw detection and sizing using advanced inspection techniques including phased array. Topics include advanced detection, sizing techniques, and inspection criteria using AWS, ASME API and FEMA codes. Upon completion, students should be able to select and apply the proper technique to detect and locate length, size, and depth flaws using manual and automated phased array equipment.

Prerequisites: Take NDE 221

**NDE 231. Advance Radiographic Testing Techniques. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0

This course provides an expert-level understanding of radiographic methods. Emphasis is placed on factors affecting image quality, RT techniques for more complex geometric situations, and enhanced film developing techniques. Upon completion, the student should be able to select a radiographic technique and film for complex geometries and enhanced film developing.

Prerequisites: Take NDE 132

**NDE 242. Advanced Visual Testing (VT). 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0

This course prepares individuals for trainee positions in performing visual examinations of pressure retaining vessels, piping, pumps, and valves for nuclear power electric generating facilities. Topics include fundamentals of visual examination with emphasis on VT-1, VT-2 and VT-3 methods. Upon completion, students should be able to demonstrate a working knowledge of ASME Code visual inspection requirements during various phases of commercial nuclear power operations.

Corequisites: Take NDE 142

**NDE 252. Eddy Current Testing (ET). 2.0 Credits.** Class-1.0. Clinical-0.0. Lab-3.0. Work-0.0

This course provides practical applications of the eddy current testing (ET) method. Topics include generic and specialized applications of ET on industrial mock-ups. Upon completion, students should be able to demonstrate an understanding of ET in industrial applications.

Prerequisites: Take NDE 153

**NDE 261. Performance Demonstration Initiative -1, Ultrasonic Testing, Carbon Steel Pipe Welds. 7.0 Credits.** Class-2.0. Clinical-0.0. Lab-15.0. Work-0.0

This course provides advanced ultrasonic instruction for nondestructive examination of carbon steel (CS) pipe welds. Topics include performance demonstration initiative (PDI), ultrasonic testing (UT), and longitudinal and shear wave examination techniques for carbon steel (CS) piping. Upon completion, students should be able to identify and describe the qualified detection and sizing techniques per PDI-UT-1 procedures.

Prerequisites: Take NDE 221

**NDE 262. Performance Demonstration Initiative -2, Ultrasonic Testing, Stainless Steel Pipe Welds. 7.0 Credits.** Class-2.0. Clinical-0.0. Lab-15.0. Work-0.0

This course provides advanced ultrasonic instruction for nondestructive examination of stainless steel (SS) pipe welds. Topics include performance demonstration initiative (PDI), ultrasonic testing (UT), and longitudinal and shear wave examination techniques for stainless steel piping. Upon completion, students should be able to identify and describe the qualified detection and sizing techniques per PDI-UT-2 procedures.

Prerequisites: Take NDE 221

**NDE 263. Perf Demonstration Initiative -3, Ultrasonic Testing, Thru Wall Sizing, Carbon Steel/Stainless Steel. 3.0 Credits.** Class-1.0.

Clinical-0.0. Lab-6.0. Work-0.0

This course provides advanced ultrasonic instruction for NDE through wall sizing (TWS) in carbon steel (CS) and stainless steel (SS) pipe welds. Topics include performance demonstration initiative (PDI), ultrasonic testing (UT), and longitudinal and shear wave examination techniques for through wall sizing. Upon completion, students should be able to identify and describe the qualified TWS techniques per PDI-UT-3 procedures.

Prerequisites: Take NDE 221

**NDE 264. Perf Demonstration Initiative -8, Ultrasonic Testing, Weld Overlay and Dissimilar Metal Thru Wall Sizing. 3.0 Credits.** Class-1.0.

Clinical-0.0. Lab-6.0. Work-0.0

This course provides advanced ultrasonic instruction for NDE of weld overlay (WOL) and dissimilar metal (DM) welds. Topics include performance demonstration initiative (PDI), ultrasonic testing (UT), and longitudinal and shear wave examination techniques for through wall sizing (TWS) of welds. Upon completion, students should be able to identify and describe the qualified TWS techniques per PDI-UT-8 procedures.

Prerequisites: Take NDE 221

**NDE 265. Performance Demonstration Initiative -10 Ultrasonic Testing, Dissimilar Metal Detection and Length Sizing. 3.0 Credits.**

Class-1.0. Clinical-0.0. Lab-6.0. Work-0.0

This course provides advance ultrasonic instruction for NDE of dissimilar metal (DM) welds for detection and length sizing. Topics include performance demonstration initiative (PDI), ultrasonic testing (UT), and longitudinal and shear wave examination techniques for detection and length sizing (DLS) of DM welds. Upon completion, students should be able to identify and describe the qualified DLS techniques per PDI-UT-10 procedures.

Prerequisites: Take NDE 221

## Nursing (NUR)

**NUR 111. Introduction to Health Concepts. 8.0 Credits.** Class-4.0. Clinical-6.0. Lab-6.0. Work-0.0

This course introduces the concepts within the three domains of the individual, healthcare, and nursing. Emphasis is placed on the concepts within each domain including medication administration, assessment, nutrition, ethics, interdisciplinary teams, informatics, evidence-based practice, individual-centered care, and quality improvement. Upon completion, students should be able to provide safe nursing care incorporating the concepts identified in this course.

**NUR 112. Health-Illness Concepts. 5.0 Credits.** Class-3.0. Clinical-6.0. Lab-0.0. Work-0.0

This course is designed to further develop the concepts within the three domains of the individual, healthcare, and nursing. Emphasis is placed on the concepts of acid-base, metabolism, cellular regulation, oxygenation, infection, stress/coping, health-wellness-illness, communication, caring interventions, managing care, safety, quality improvement, and informatics. Upon completion, students should be able to provide safe nursing care incorporating the concepts identified in this course.

Prerequisites: Take NUR 111 Minimum grade C

**NUR 113. Family Health Concepts. 5.0 Credits.** Class-3.0. Clinical-6.0. Lab-0.0. Work-0.0

This course is designed to further develop the concepts within the three domains of the individual, healthcare, and nursing. Emphasis is placed on the concepts of oxygenation, sexuality, reproduction, grief/loss, mood/affect, behaviors, development, family, health-wellness-illness, communication, caring interventions, managing care, safety, and advocacy. Upon completion, students should be able to provide safe nursing care incorporating the concepts identified in this course.

Prerequisites: Take NUR 111 Minimum grade C

**NUR 114. Holistic Health Concepts. 5.0 Credits.** Class-3.0. Clinical-6.0. Lab-0.0. Work-0.0

This course is designed to further develop the concepts within the three domains of the individual, healthcare, and nursing. Emphasis is placed on the concepts of cellular regulation, perfusion, inflammation, sensory perception, stress/coping, mood/affect, cognition, self, violence, health-wellness-illness, professional behaviors, caring interventions, and safety. Upon completion, students should be able to provide safe nursing care incorporating the concepts identified in this course.

Prerequisites: Take NUR 111 Minimum grade C

**NUR 211. Health Care Concepts. 5.0 Credits.** Class-3.0. Clinical-6.0. Lab-0.0. Work-0.0

This course is designed to further develop the concepts within the three domains of the individual, healthcare, and nursing. Emphasis is placed on the concepts of cellular regulation, perfusion, infection, immunity, mobility, comfort, behaviors, health-wellness-illness, clinical decision-making, caring interventions, managing care, and safety. Upon completion, students should be able to provide safe nursing care incorporating the concepts identified in this course.

Prerequisites: Take NUR 111 Minimum grade C

**NUR 212AB. Health System Concepts. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course is designed to further develop the concepts within the three domains of the individual, healthcare, and nursing. Emphasis is placed on the concepts of grief/loss, violence, health-wellness-illness, collaboration, managing care, safety, advocacy, legal issues, policy, healthcare systems, ethics, accountability, and evidence-based practice. Upon completion, students should be able to provide safe nursing care incorporating the concepts identified in this course.

Prerequisites: Take NUR 111 Minimum grade C

**NUR 212BB. Health System Concepts. 2.0 Credits.** Class-0.0. Clinical-6.0. Lab-0.0. Work-0.0

This course is designed to further develop the concepts within the three domains of the individual, healthcare, and nursing. Emphasis is placed on the concepts of grief/loss, violence, health-wellness-illness, collaboration, managing care, safety, advocacy, legal issues, policy, healthcare systems, ethics, accountability, and evidence-based practice. Upon completion, students should be able to provide safe nursing care incorporating the concepts identified in this course.

Prerequisites: Take NUR 111 Minimum grade C

Corequisites: Take NUR 212AB

**NUR 212. Health System Concepts. 5.0 Credits.** Class-3.0. Clinical-6.0. Lab-0.0. Work-0.0

This course is designed to further develop the concepts within the three domains of the individual, healthcare, and nursing. Emphasis is placed on the concepts of grief/loss, violence, health-wellness-illness, collaboration, managing care, safety, advocacy, legal issues, policy, healthcare systems, ethics, accountability, and evidence-based practice. Upon completion, students should be able to provide safe nursing care incorporating the concepts identified in this course.

Prerequisites: Take NUR 111 Minimum grade C

**NUR 213. Complex Health Concepts. 10.0 Credits.** Class-4.0. Clinical-15.0. Lab-3.0. Work-0.0

This course is designed to assimilate the concepts within the three domains of the individual, healthcare, and nursing. Emphasis is placed on the concepts of fluid/electrolytes, metabolism, perfusion, mobility, stress/coping, violence, health-wellness-illness, professional behaviors, caring interventions, managing care, healthcare systems, and quality improvement. Upon completion, students should be able to demonstrate the knowledge, skills, and attitudes necessary to provide quality, individualized, entry level nursing care.

Prerequisites: Take NUR 111 Minimum grade C

Corequisites: Take NUR 112, NUR 113, NUR 114, NUR 211 and NUR 212

## Nursing Assistant (NAS)

**NAS 101. Nurse Aide I. 6.0 Credits.** Class-3.0. Clinical-3.0. Lab-4.0. Work-0.0

This course includes basic nursing skills required to provide safe, competent personal care for individuals. Emphasis is placed on person-centered care, the aging process, communication, safety/emergencies, infection prevention, legal and ethical issues, vital signs, height and weight measurements, elimination, nutrition, basic restorative care/rehabilitation, dementia, mental health and end-of-life care. Upon completion, students should be able to demonstrate knowledge and skills and be eligible to test for listing on the North Carolina Nurse Aide I Registry.

**NAS 102. Nurse Aide II. 6.0 Credits.** Class-3.0. Clinical-6.0. Lab-2.0. Work-0.0

This course provides training in Nurse Aide II tasks. Emphasis is placed on the role of the Nurse Aide II, sterile technique and specific tasks such as urinary catheterization, wound care, respiratory procedures, ostomy care, peripheral IV assistive activities, and alternative feeding methods. Upon completion, students should be able to demonstrate knowledge and skills and safe performance of skills necessary to be eligible for listing on the North Carolina Nurse Aide II Registry.

Prerequisites: Take NAS 101

## Nutrition (NUT)

**NUT 110. Nutrition. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course covers basic principles of nutrition and their relationship to human health. Topics include meeting nutritional needs of healthy people, menu modification based on special dietary needs, food habits, and contemporary problems associated with nutrition. Upon completion, students should be able to apply basic nutritional concepts as they relate to health and well being.



## Occupational Therapy Assistant (OTA)

**OTA 110. Fundamentals of OT. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0

This course introduces occupational therapy (OT) theory, practice, philosophy, and principles. Emphasis is placed on providing a basic understanding of the profession as well as beginning to develop interaction and observation skills. Upon completion, students should be able to demonstrate basic understanding of the domain and practice of occupational therapy, practice settings and professional roles, OT terminology, activity analysis, principles, process, philosophies, and frames of reference.

Corequisites: Take BIO 165 or BIO 168 Minimum grade C

**OTA 120. OT Media I. 2.0 Credits.** Class-1.0. Clinical-0.0. Lab-3.0. Work-0.0

This course provides training in recognizing the therapeutic value and use of a wide variety of human occupations including basic activities of daily living, instrumental activities of daily living, rest and sleep, education, work, play, leisure, and social participation. Topics include the understanding of different teaching and learning methods and styles, the language of occupational therapy (OT), OT interventions including preparatory methods and tasks, and restorative and compensatory techniques. Upon completion, students should be able to analyze, design, select, and safely perform occupation related activities that would be therapeutic for various populations across the lifespan.

Corequisites: Take OTA 110

**OTA 130. Assessment Skills. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0

This course provides training in appropriate and accurate assessment skills related to sensation, movement, vision, perception, cognition, emotions, and performance of basic activities of daily living and instrumental activities of daily living. Topics include physical and psychosocial factors affecting performance; and sensory, range of motion, strength, coordination, cognitive, visual-perceptual, self-care, and work-related assessments. Upon completion, students should be able to gather and share data for the purpose of screening and evaluation, administer selected assessments using appropriate procedures and protocols, and articulate the role of the occupational therapy assistant and occupational therapist in the screening and evaluation process.

Corequisites: Take OTA 110

**OTA 135. Kinesiology. 1.0 Credit.** Class-0.0. Clinical-0.0. Lab-3.0. Work-0.0

This course provides training in understanding and using principles of normal human movement. Topics include terminology, structures of the body associated with movement, principles of motion, analysis of movement, joint structure and its impact on motion, and muscle actions. Upon completion, students should be able to demonstrate proficiency in identifying terms associated with movement, motions, structures, normal ranges and directions of motion, and general principles of human movement; and apply biomechanical principles to safe and efficient functional mobility activities.

Prerequisites: Take OTA 110

Corequisites: Take One: BIO 165 or BIO 168

**OTA 140. Professional Skills I. 1.0 Credit.** Class-0.0. Clinical-0.0. Lab-3.0. Work-0.0

This course introduces the roles and responsibilities of the occupational therapy assistant (OTA) and the occupational therapist (OT) in occupational therapy practice and facilitates development of professional behaviors and skills. Topics include professional ethics, supervisory roles, responsibilities, and collaborative professional relationships; credentialing, certification, and licensure; documentation, which communicates the need and rationale for occupational therapy services; therapeutic use of self; and professional identity and professional behaviors; and observation skills. Upon completion, students should be able to demonstrate ethical behavior, discriminate between roles and responsibilities of the OTA and OT, and explain acceptable supervision and documentation.

Corequisites: Take OTA 110

**OTA 150. Pediatric Concepts and Interventions. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0

This course provides knowledge and skills needed for working with children from birth through adolescence. Topics include review of normal growth and development, habituation of healthy habits/routines, the role of occupational therapy with caregivers/providers, understanding of common conditions and developmental delays; and the role of occupation in assessment, intervention planning and implementation with pediatric populations. Upon completion, students should be able to plan, implement, and modify appropriate interventions with children in their context and environment to promote engagement in occupation.

Corequisites: Take PSY 241 and OTA 170

**OTA 161AB. Fieldwork I-Placement 1. 0.5 Credits.** Class-0.0. Clinical-1.5. Lab-0.0. Work-0.0

This course provides introductory-level clinical training opportunities. Emphasis is placed on observational and basic interactional skills in a setting with a culturally diverse client population. Upon completion, students should be able to use observational and interactional skills to relate effectively with clients under the guidance/direction of fieldwork supervisors.

Prerequisites: Take OTA 120 OTA 140 with a minimum grade of C

**OTA 161BB. Fieldwork I-Placement 1. 0.5 Credits.** Class-0.0. Clinical-1.5. Lab-0.0. Work-0.0

This course provides introductory-level clinical training opportunities. Emphasis is placed on observational and basic interactional skills in a setting with a culturally diverse client population. Upon completion, students should be able to use observational and interactional skills to relate effectively with clients under the guidance/direction of fieldwork supervisors.

Prerequisites: Take OTA 120 OTA 140 with a minimum grade of C

Corequisites: Take OTA 161AB

**OTA 161. Fieldwork I-Placement 1. 1.0 Credit.** Class-0.0. Clinical-3.0. Lab-0.0. Work-0.0

This course provides introductory-level clinical training opportunities. Emphasis is placed on observational and basic interactional skills in a setting with a culturally diverse client population. Upon completion, students should be able to use observational and interactional skills to relate effectively with clients under the guidance/direction of fieldwork supervisors.

Prerequisites: Take OTA 120 OTA 140 with a minimum grade of C

**OTA 162. Fieldwork I-Placement 2. 1.0 Credit.** Class-0.0. Clinical-3.0. Lab-0.0. Work-0.0

This course provides introductory-level clinical training opportunities. Emphasis is placed on observational and basic interactional skills in a setting with a culturally diverse client population. Upon completion, students should be able to use observational and interactional skills to relate effectively with clients under the guidance/direction of fieldwork supervisors.

Prerequisites: Take OTA 120 OTA 140 Minimum grade C

Corequisites: Take OTA 130

**OTA 163. Fieldwork I-Placement 3. 1.0 Credit.** Class-0.0. Clinical-3.0. Lab-0.0. Work-0.0

This course provides introductory-level clinical training opportunities. Emphasis is placed on observational and basic interactional skills in a setting with a culturally diverse client population. Upon completion, students should be able to use observational and interactional skills to relate effectively with clients under the guidance/direction of fieldwork supervisors.

Prerequisites: Take OTA 120 OTA 140 Minimum grade C

Corequisites: Take OTA 130

**OTA 170. Physical Conditions. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0

This course is designed to provide knowledge and skills needed for working with individuals experiencing various medical conditions to help them achieve participation in life through engagement in occupation. Topics include medical terminology, common conditions, body functions that change with disease processes, applicable theories and principles, assessment and intervention priorities for commonly treated conditions. Upon completion, students should be able to recognize common symptoms, prioritize mental, neuromusculoskeletal and movement related functional problems, while providing for patient safety within the patient's context and environment.

Corequisites: Take OTA 130

**OTA 180. Psychosocial Conditions. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0

This course is designed to provide knowledge and skills needed for working with individuals experiencing various psychosocial conditions to help them achieve participation in life through engagement in occupation. Topics include mental health conditions, applicable theories and principles, symptoms of dysfunction, assessment and treatment of individuals, planning and facilitating therapeutic groups, client safety, therapeutic use of self, and psychosocial aspects of practice. Upon completion, students should be able to effectively plan and conduct individual and group interventions for client conditions related to psychosocial dysfunction while recognizing contexts and environments that may also impact occupational performance.

Prerequisites: Take PSY 281 Minimum grade C

Corequisites: Take OTA 130

**OTA 220. OT Media II. 3.0 Credits.** Class-1.0. Clinical-0.0. Lab-6.0. Work-0.0

This course provides training in appropriate and accurate assessment and intervention skills related to orthotics, prosthetics, assistive devices, assistive technology, client mobility, and Americans with Disabilities Act (ADA) issues. Topics include ergonomics seating and positioning, community mobility, use of physical agent modalities, and technology in occupational therapy intervention. Upon completion, students should be able to demonstrate competency fabricating and utilizing orthotic and assistive devices, understanding ADA guidelines, and using technology for engagement in occupation.

Prerequisites: Take OTA 120 OTA 130 Minimum grade C

**OTA 240. Professional Skills II. 1.0 Credit.** Class-0.0. Clinical-0.0. Lab-3.0. Work-0.0

This course covers professional development, supervisory relationships, involvement in the profession, and clinic management skills. Topics include clarification of roles and responsibilities, detailed examination of the supervisory process, participation in professional organizations, and the mechanics of assisting in clinic operations. Upon completion, students should be able to work effectively with a supervisor, plan and implement a professional activity, and perform routine clinic management tasks.

Prerequisites: Take OTA 140 Minimum grade C

**OTA 250. Adult Concepts and Interventions. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0

This course provides knowledge and skills needed for working with adults through the lifespan. Emphasis is placed on identification and discussion of common changes associated with aging, disabilities and chronic diseases affecting this population, assessments and intervention, including developing healthy habits and routines, and the impact on participation in occupation in various settings. Upon completion, students should be able to plan, implement, and modify appropriate interventions with adults in their context and environment to promote engagement in occupations.

Corequisites: Take PSY 241, OTA 170 and OTA 180

**OTA 260. Level II Fieldwork Placement 1. 6.0 Credits.** Class-0.0. Clinical-18.0. Lab-0.0. Work-0.0

This course provides clinical experience under the direct supervision of experienced occupational therapists or occupational therapy assistant practitioners working in various practice settings. Emphasis is placed on final clinical preparation for entry-level practice in the profession. Upon completion, students should be able to meet all critical competencies for entry-level practice established by the curriculum, AOTA guidelines, and regulatory bodies.

**OTA 261. Level II Fieldwork Placement 2. 6.0 Credits.** Class-0.0. Clinical-18.0. Lab-0.0. Work-0.0

This course provides the final clinical experience under the direct supervision of experienced occupational therapists or occupational therapy assistant practitioners working in various practice settings. Emphasis is placed on final clinical preparation for entry-level practice in the profession. Upon completion, students should be able to meet all critical competencies for entry-level practice established by the curriculum, AOTA guidelines, and regulatory bodies.

**OTA 280. Professional Transitions. 1.0 Credit.** Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0

This course provides closure to the educational program in conjunction with clinical experience. Emphasis is placed on portfolio development and presentation, program evaluation, analysis and synthesis of clinical experiences, and final preparation for the certification examination. Upon completion, students should be able to enter the occupational therapy (OT) workforce with an understanding of themselves as OT professionals, and with supportive documentation demonstrating progress toward meeting competencies set forth by the profession and regulatory bodies.

Corequisites: Take One: OTA 260 or OTA 261

## Office Systems Technology (OST)

**OST 122. Office Computations. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0

This course covers the keypad touch method using the electronic calculator (10-key) and mathematical functions used in office applications. Topics may include budgets, discounts, purchasing, inventory, and petty cash. Upon completion, students should be able to solve a wide variety of numerical problems commonly encountered in an office setting.

**OST 131. Keyboarding. 2.0 Credits.** Class-1.0. Clinical-0.0. Lab-2.0. Work-0.0

This course covers basic keyboarding skills. Emphasis is placed on the touch system, correct techniques, and development of speed and accuracy. Upon completion, students should be able to key at an acceptable speed and accuracy level using the touch system.

**OST 132. Keyboard Skill Building. 2.0 Credits.** Class-1.0. Clinical-0.0. Lab-2.0. Work-0.0

This course is designed to increase speed and improve accuracy in keyboarding. Emphasis is placed on diagnostic tests to identify accuracy and speed deficiencies followed by corrective drills. Upon completion, students should be able to keyboard rhythmically with greater accuracy and speed.

**OST 134. Text Entry & Formatting. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0

This course is designed to provide skills needed to increase speed, improve accuracy, and format documents. Topics include letters, memos, tables, and business reports. Upon completion, students should be able to produce documents and key timed writings at speeds commensurate with employability.

Prerequisites: Take OST 131 Minimum grade C

**OST 135. Advanced Text Entry and Formatting. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0

This course is designed to incorporate computer application skills in the generation of office documents. Emphasis is placed on advanced document production with increased speed and accuracy. Upon completion, students should be able to make independent decisions regarding planning, style, and method of presentation.

Prerequisites: Take OST 134 Minimum grade C

**OST 136. Word Processing. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0

This course is designed to introduce word processing concepts and applications. Topics include preparation of a variety of documents and mastery of specialized software functions. Upon completion, students should be able to work effectively in a computerized word processing environment. Students should be proficient in keyboarding skills and will be introduced to a computerized skills and concepts testing environment.

Prerequisites: Take OST 131 or CIS 110 Minimum grade C

**OST 137. Office Applications I. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0

This course introduces the concepts and functions of software that meets the changing needs of the community. Emphasis is placed on the terminology and use of software through a hands-on approach. Upon completion, students should be able to use software in a business environment.

**OST 138. Office Applications II. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0

This course is designed to improve the proficiency in the utilization of software applications used in business offices through a hands-on approach. Emphasis is placed on in-depth usage of software to create a variety of documents applicable to current business environments. Upon completion, students should be able to master the skills required to design documents that can be customized using the latest software applications.

Prerequisites: Take One: CIS 110, CIS 111, or OST 137

**OST 141. Medical Office Terms I. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course uses a language-structure approach to present the terminology and vocabulary that will be encountered in medical office settings. Topics include word parts that relate to systemic components, conditions, pathology, and disorder remediation in approximately one-half of the systems of the human body. Upon completion, students should be able to relate words to systems, pluralize, define, pronounce, and construct sentences with the included terms.

**OST 142. Medical Office Terms II. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course is a continuation of OST 141 and continues the study, using a language-structure approach, of medical office terminology and vocabulary. Topics include word parts that relate to systemic components, conditions, pathology, and disorder remediation in the remaining systems of the human body. Upon completion, students should be able to relate words to systems, pluralize, define, pronounce, and construct sentences with the included terms.

Prerequisites: Take One: MED 121 or OST 141

**OST 148. Medical Insurance and Billing. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course introduces fundamentals of medical insurance and billing. Emphasis is placed on the medical billing cycle to include third party payers, coding concepts, and form preparation. Upon completion, students should be able to explain the life cycle of and accurately complete a medical insurance claim.

**OST 149. Medical Legal Issues. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course introduces the complex legal, moral, and ethical issues involved in providing health-care services. Emphasis is placed on the legal requirements of medical practices; the relationship of physician, patient, and office personnel; professional liabilities; and medical practice liability. Upon completion, students should be able to demonstrate a working knowledge of current medical law and accepted ethical behavior.

**OST 153. Office Finance Solutions. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0

This course introduces basic bookkeeping concepts. Topics include entering data in accounts payable and receivable, keeping petty cash records, maintaining inventory, reconciling bank statements, running payroll, and generating simple financial reports. Upon completion, students should be able to demonstrate competence in the entry and manipulation of data to provide financial solutions for the office.

Prerequisites: Take One: CIS 110, CIS 111 or OST 137

**OST 155. Legal Terminology. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course covers the terminology appropriate to the legal profession. Topics include legal research, court systems, litigation, civil and criminal law, probate, real and personal property, contracts and leases, domestic relations, equity, and corporations. Upon completion, students should be able to spell, pronounce, define, and accurately use legal terms.

**OST 156. Legal Office Procedures. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0

This course covers legal office functions involved in the operation of a law office. Emphasis is placed on procedures in the law office involving the court system, legal research, litigation, probate, and real estate, personal injury, criminal, and civil law. Upon completion, students should be able to demonstrate a high level of competence in performing legal office duties. This course is a unique requirement of the Legal Office Systems concentration in the Office Systems Technology program.

Prerequisites: Take OST 134

**OST 164. Office Editing. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course provides a comprehensive study of editing skills needed in the workplace. Emphasis is placed on grammar, punctuation, sentence structure, proofreading, and editing. Upon completion, students should be able to use reference materials to compose and edit text.

**OST 165. Advanced Office Editing. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0

This course is designed to develop proficiency in advanced editing skills needed in the office environment. Emphasis is placed on the application of creating effective electronic office documents. Upon completion, students should be able to apply advanced editing skills to compose text.

Prerequisites: Take OST 164

**OST 184. Records Management. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0

This course includes the creation, maintenance, protection, security, and disposition of records stored in a variety of media forms. Topics include alphabetic, geographic, subject, and numeric filing methods. Upon completion, students should be able to set up and maintain a records management system.

**OST 191. Selected Topics in Office Systems Technology. 1.0 Credit.** Class-1.0. Clinical-0.0. Lab-0.0. Work-0.0

**OST 223. Administrative Office Transcription I. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0

This course provides experience in transcribing documents. Emphasis is placed on appropriate formatting, advanced text editing skills, and transcription techniques. Upon completion, students should be able to transcribe office documents.

Prerequisites: Complete one of the following options: Take OST 134 OST 164 with a minimum grade of C

Take OST 136 OST 164 with a minimum grade of C

**OST 233. Office Publications Design. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0

This course provides entry-level skills in using software with desktop publishing capabilities. Topics include principles of page layout, desktop publishing terminology and applications, and legal and ethical considerations of software use. Upon completion, students should be able to design and produce professional business documents and publications. Hands-on experience using a software package on a PC is provided to illustrate concepts and provide practice in developing documents and publications.

Prerequisites: Take OST 136

**OST 236. Advanced Word Processing. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0

This course develops proficiency in the utilization of advanced word processing functions. Emphasis is placed on advanced word processing features. Upon completion, students should be able to produce a variety of complex business documents.

Prerequisites: Take OST 136 Minimum grade C

**OST 238. Office Applications III. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0

This course is designed to prepare students to analyze data and prepare advanced documents and reports using office software. Emphasis is placed on in-depth usage of software to create a variety of advanced documents applicable to current business environments. Upon completion, students should be able to master the advanced skills required to design documents that can be customized using the latest software applications.

Prerequisites: Take OST 138

**OST 241. Medical Office Transcription I. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0

This course introduces current transcription techniques as applied to medical documents. Emphasis is placed on accurate transcription, proofreading, editing and use of reference materials as well as vocabulary building. Upon completion, students should be able to prepare accurate and usable medical documents in the covered specialties.

Prerequisites: Take MED 121 or OST 141 with a minimum grade of C  
Take OST 134 and OST 136 with a minimum grade of C

**OST 243. Med Office Simulation. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0

This course introduces medical systems used to process information in the automated office. Topics include traditional and electronic information resources, storing and retrieving information, and the billing cycle. Upon completion, students should be able to use the computer accurately to schedule, bill, update, and make corrections.

Prerequisites: Take OST 148 Minimum grade C

**OST 247. Procedure Coding. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0

This course provides in-depth coverage of procedural coding. Emphasis is placed on CPT and HCPCS coding systems. Upon completion, students should be able to properly code procedures and services performed in a medical facility.

Prerequisites: Take MED 121 or OST 141 Minimum grade C

**OST 248. Diagnostic Coding. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0

This course provides an in-depth study of diagnostic coding. Emphasis is placed on ICD coding system. Upon completion, students should be able to properly code diagnoses in a medical facility.

Prerequisites: Take MED 121 or OST 141 Minimum grade C

**OST 249. Medical Coding Certification Preparation. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0

This course provides instruction that will prepare students to sit for a national coding certification exam. Topics include diagnostic and procedural coding. Upon completion, students should be able to sit for various medical coding certification exams.

Prerequisites: Take OST 247 and OST 248 Minimum grade C

**OST 250. Long-Term Care Coding. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0

This course covers diagnostic coding as it applies to long-term care facilities and home care. Topics include diagnostic coding and reimbursement in long-term care facilities and home care. Upon completion, students should be able to properly code conditions for long-term care and home care services.

Prerequisites: Take MED 121 or OST 141 Minimum grade C



**OST 251. Legal Document Formatting. 3.0 Credits.** Class-2.0.

Clinical-0.0. Lab-2.0. Work-0.0

This document is designed to provide experience in the preparation of various types of legal forms and documents. Emphasis is placed on formatting and keying legal forms, documents, and correspondence. Upon completion, students should be able to produce these documents with accuracy and speed.

Prerequisites: Complete one of the following options: Take OST 134 OST 155

Take OST 136 OST 155

**OST 252. Legal Transcription I. 3.0 Credits.** Class-2.0. Clinical-0.0.

Lab-2.0. Work-0.0

This course provides experience in transcribing legal correspondence, forms, and documents. Emphasis is placed on developing listening skills to transcribe documents. Upon completion, students should be able to transcribe documents with accuracy.

Prerequisites: Complete one of the following options: Take OST 134 or OST 136 with a minimum grade of C

Take OST 155 with a minimum grade of C

**OST 284. Emerging Technologies. 2.0 Credits.** Class-1.0. Clinical-0.0.

Lab-2.0. Work-0.0

This course provides opportunities to explore emerging technologies. Emphasis is placed on identifying, researching, and presenting current technological topics for class consideration and discussion. Upon completion, students should be able to understand the importance of keeping abreast of technological changes that affect the office professional.

**OST 286. Professional Development. 3.0 Credits.** Class-3.0.

Clinical-0.0. Lab-0.0. Work-0.0

This course covers the personal competencies and qualities needed to project a professional image in the office. Topics include interpersonal skills, health lifestyles, appearance, attitude, personal and professional growth, multicultural awareness, and professional etiquette. Upon completion, students should be able to demonstrate these attributes in the classroom, office, and society.

**OST 288. Medical Office Administration Capstone. 3.0 Credits.**

Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0

This course is designed to be a capstone course for the medical office professional and provides a working knowledge of medical office procedures. Emphasis is placed on written and oral communication skills, practice management, electronic health records, medical office procedures, ethics, and professional development. Upon completion, students should be able to demonstrate the skills necessary to manage a medical office.

Prerequisites: Take One: OST 148 or HMT 210

**OST 289. Office Administration Capstone. 3.0 Credits.** Class-2.0.

Clinical-0.0. Lab-2.0. Work-0.0

This course is designed to be a capstone course for the office professional and provides a working knowledge of administrative office procedures. Emphasis is placed on written and oral communication skills, office software applications, office procedures, ethics, and professional development. Upon completion, students should be able to adapt in an office environment.

Prerequisites: Complete one of the following options: Take OST 134 and OST 164 with a minimum grade of C

Take OST 136 and OST 164 with a minimum grade of C

## Operations Management (OMT)

**OMT 110. Intro to Operations Mgmt. 3.0 Credits.** Class-3.0. Clinical-0.0.

Lab-0.0. Work-0.0

This course provides an overview of the operations management field. Topics include production and operations planning, materials management, environmental health and safety, and quality management. Upon completion, students should be able to demonstrate an understanding of the operations management functions.

Prerequisites: Complete one of the following options: Take DRE 098 Take EFL 111 EFL 112

Take ENG 111

## Opticianry (OPH)

**OPH 113. Introduction to Diseases of the Eye. 2.0 Credits.** Class-2.0.

Clinical-0.0. Lab-0.0. Work-0.0

This course introduces common external and internal diseases of the eye and orbital region. Topics include common patient complaints, ocular emergencies, triage procedures and common ocular conditions and disorders. Upon completion, the student should be able to identify most common ocular diseases and determine appropriate emergency management of acute ocular problems.

Prerequisites: Take All: OPH 150 and OPH 151

**OPH 114. Basic Ophthalmic Pharmacology. 2.0 Credits.** Class-2.0.

Clinical-0.0. Lab-0.0. Work-0.0

This course introduces and compares drug delivery systems. Topics include the use of diagnostic agents and various classes of drugs commonly used in ophthalmic practices. Upon completion, the students should administer and record topical and oral medications at the physician's direction.

Prerequisites: Take OPH 150 and OPH 151

**OPH 115. Ophthalmic Clinical Procedures I. 2.0 Credits.** Class-1.0.

Clinical-0.0. Lab-2.0. Work-0.0

This course introduces basic clinical procedures for the ophthalmic practice. Topics include telephone triage and basic procedures commonly used in the preliminary examination of patients. Topics include basic procedures commonly used in the preliminary examination of patients. Upon completion, the student should be able to perform basic administrative tasks and perform basic procedures commonly used in patient examinations.

Prerequisites: Take OPH 150 and OPH 151

**OPH 116. Ophthalmic Medical Assistant Practicum I. 6.0 Credits.**

Class-0.0. Clinical-18.0. Lab-0.0. Work-0.0

This course introduces ophthalmic patient care procedures. Topics include interpersonal skills with patients, work and legal ethics, confidentiality, clinical appearance and performance. Upon completion, the student will be able to demonstrate competence and efficiency in basic clinical skills.

Prerequisites: Take OPH 150 and OPH 151

**OPH 117. Ophthalmic Clinical Procedures II. 2.0 Credits.** Class-1.0.

Clinical-0.0. Lab-2.0. Work-0.0

This course introduces more intermediate clinical procedures for the ophthalmic practice. Topics include coding and testing associated with the treatment of glaucoma, cataracts and refractive errors. Upon completion, the student should understand coding for ophthalmic procedures and perform more intermediate clinical procedures.

Prerequisites: Take OPH 115

**OPH 118. Ophthalmic Patient Care. 2.0 Credits.** Class-2.0. Clinical-0.0. Lab-0.0. Work-0.0

This course is an overview of the care of the ophthalmic patient. Topics include systemic diseases in the eye, review of first aid, emergency equipment and supplies, infection control, identification and sterilization of minor surgical equipment, and aseptic technique. Upon completion, the students should be able to apply these principles in their interactions with patients.

Prerequisites: Take All: OPH 150 and OPH 151

**OPH 119. Ophthalmic Optics & Basic Refractometry. 2.0 Credits.** Class-2.0. Clinical-0.0. Lab-0.0. Work-0.0

This course introduces basic theoretical and clinical optics. Topics include interaction of light and lenses, refractive states of the eye, and principles of retinoscopy and refractometry. Upon completion, the student will demonstrate physical and geometric optics, and basic refractometry techniques.

Prerequisites: Take All: OPH 150 and OPH 151

**OPH 120. Ophthalmic Medical Assistant Practicum II. 6.0 Credits.** Class-0.0. Clinical-18.0. Lab-0.0. Work-0.0

This course provides additional clinical experience in ophthalmic patient care procedures. Topics include interpersonal skills with patients, work and legal ethics, confidentiality, appearance and performance. Upon completion, the student will be able to perform basic and intermediate clinical skills, working towards competence and efficiency.

Prerequisites: Take OPH 116

**OPH 150. Intro to Ophthalmic Medical Assisting. 2.0 Credits.**

Class-2.0. Clinical-0.0. Lab-0.0. Work-0.0

This course introduces the role, scope, and duties of the ophthalmic assistant. Topics include medical ethics, duties of assistant, medical history, basic medical terminology, and an overview of human anatomy and physiology. Upon completion, students should be able to demonstrate knowledge of medical history taking and show an understanding of the role of ophthalmic medical personnel in patient care.

Corequisites: Take OPH 151

**OPH 151. Ocular Anatomy & Physiology. 2.0 Credits.** Class-2.0. Clinical-0.0. Lab-0.0. Work-0.0

This course studies the normal anatomy and physiology of eye and orbit. Topics include structures of the eye, functioning process of the eye and correct medical terminology of the structures and functions of the eye.

Upon completion, the student should demonstrate a basic understanding and fundamental principles of anatomy and physiology of the eye.

Corequisites: Take OPH 150

**OPH 217. Ophthalmic Clinical Procedures III. 2.0 Credits.** Class-1.0. Clinical-0.0. Lab-2.0. Work-0.0

This course focuses on advanced clinical procedures for the ophthalmic practice. Topics include an emphasis on more advanced skill development. Upon completion, students should be able to demonstrate increasing speed and accuracy in performing clinical skills.

Prerequisites: Take OPH 117

**OPH 218. Advanced Ophthalmic Patient Care. 2.0 Credits.** Class-1.0. Clinical-0.0. Lab-2.0. Work-0.0

This course presents the principles of advanced diagnostic testing and techniques. Topics include advanced imaging and supplemental testing. Upon completion, students should be able to apply these principles in their interaction with patients.

Prerequisites: Take OPH 118

**OPH 219. Ophthalmic Optics and Refractometry II. 2.0 Credits.**

Class-1.0. Clinical-0.0. Lab-2.0. Work-0.0

This course reviews intermediate theoretical and clinical optics and covers theories of visual perception. Topics include low vision, contact lenses, and advanced principles of retinoscopy and refractometry. Upon completion, the student will demonstrate more advanced proficiency in optical calculations.

Prerequisites: Take OPH 119

**OPH 220. Ophthalmic Medical Assistant Practicum III. 8.0 Credits.** Class-0.0. Clinical-24.0. Lab-0.0. Work-0.0

This course provides additional clinical experience in ophthalmic patient care procedures. Topics include developing proficiency while performing ophthalmic diagnostic and imaging procedures. Upon completion, the student will be able to perform actual patient examination under supervision while demonstrating increased clinical competence and efficiency.

Prerequisites: Take OPH 120

## Pharmacy (PHM)

**PHM 110. Introduction to Pharmacy. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course introduces pharmacy practice and the technician's role in a variety of pharmacy settings. Topics include medical terminology and abbreviations, drug delivery systems, law and ethics, prescription and medication orders, and the health care system. Upon completion, students should be able to explain the role of pharmacy technicians, read and interpret drug orders, describe quality assurance, and utilize pharmacy references.

**PHM 111. Pharmacy Practice I. 4.0 Credits.** Class-3.0. Clinical-0.0. Lab-3.0. Work-0.0

This course provides instruction in the technical procedures for preparing and dispensing drugs in the hospital and retail settings under supervision of a registered pharmacist. Topics include drug packaging and labeling, out-patient dispensing, hospital dispensing procedures, controlled substance procedures, inventory control, and non-sterile compounding. Upon completion, students should be able to perform basic supervised dispensing techniques in a variety of pharmacy settings.

Corequisites: Take PHM 110 and PHM 115

**PHM 115. Pharmacy Calculations. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course provides an introduction to the metric, apothecary, and apothecary systems of measurement and the calculations used in pharmacy practice. Topics include ratio and proportion, dosage determinations, percentage preparations, reducing and enlarging formulas, dilution and concentration, aliquots, specific gravity and density, and flow rates. Upon completion, students should be able to correctly perform calculations required to properly prepare a medication order.

**PHM 118. Sterile Products. 4.0 Credits.** Class-3.0. Clinical-0.0. Lab-3.0. Work-0.0

This course provides an introduction to intravenous admixture preparation and other sterile products, including total parenteral nutrition and chemotherapy. Topics include aseptic techniques; facilities, equipment, and supplies utilized in admixture preparation; incompatibility and stability; laminar flow hoods; immunizations and irrigation solutions; and quality assurance. Upon completion, students should be able to describe and demonstrate the steps involved in preparation of intermittent and continuous infusions, total parenteral nutrition, and chemotherapy.

Prerequisites: Take PHM 110 PHM 111 Minimum grade C

**PHM 120. Pharmacology I. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course introduces the study of the properties, effects, and therapeutic value of the primary agents in the major drug categories. Topics include nutritional products, blood modifiers, hormones, diuretics, cardiovascular agents, respiratory drugs, and gastrointestinal agents. Upon completion, students should be able to place major drugs into correct therapeutic categories and identify indications, side effects, and trade and generic names.

**PHM 125. Pharmacology II. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course provides a continuation of the study of the properties, effects, and therapeutic value of the primary agents in the major drug categories. Topics include autonomic and central nervous system agents, anti-inflammatory agents, and anti-infective drugs. Upon completion, students should be able to place major drugs into correct therapeutic categories and identify indications, side effects, and trade and generic names. Prerequisites: Take PHM 120 Minimum grade C

**PHM 132. Pharmacy Clinical. 2.0 Credits.** Class-0.0. Clinical-6.0. Lab-0.0. Work-0.0

This course provides an opportunity to work in pharmacy settings under a pharmacist's supervision. Emphasis is placed on effective communication with personnel, developing proper employee attitude, and dispensing of medications. Upon completion, students should be able to demonstrate an understanding of pharmacy operations, utilize references, dispense medications, prepare patient charges, and efficiently operate computers. Prerequisites: Take PHM 111 with a minimum grade of C

**PHM 133. Pharmacy Clinical. 3.0 Credits.** Class-0.0. Clinical-9.0. Lab-0.0. Work-0.0

This course provides an opportunity to work in pharmacy settings under a pharmacist's supervision. Emphasis is placed on effective communication with personnel, developing proper employee attitude, and dispensing of medications. Upon completion, students should be able to demonstrate an understanding of pharmacy operations, utilize references, dispense medications, prepare patient charges, and efficiently operate computers.

**PHM 134. Pharmacy Clinical. 4.0 Credits.** Class-0.0. Clinical-12.0. Lab-0.0. Work-0.0

This course provides an opportunity to work in pharmacy settings under a pharmacist's supervision. Emphasis is placed on effective communication with personnel, developing proper employee attitude, and dispensing of medications. Upon completion, students should be able to demonstrate an understanding of pharmacy operations, utilize references, dispense medications, prepare patient charges, and efficiently operate computers.

**PHM 135. Pharmacy Clinical. 5.0 Credits.** Class-0.0. Clinical-15.0. Lab-0.0. Work-0.0

This course provides an opportunity to work in pharmacy settings under a pharmacist's supervision. Emphasis is placed on effective communication with personnel, developing proper employee attitude, and dispensing of medications. Upon completion, students should be able to demonstrate an understanding of pharmacy operations, utilize references, dispense medications, prepare patient charges, and efficiently operate computers.

**PHM 136. Pharmacy Clinical. 6.0 Credits.** Class-0.0. Clinical-18.0. Lab-0.0. Work-0.0

This course provides an opportunity to work in pharmacy settings under a pharmacist's supervision. Emphasis is placed on effective communication with personnel, developing proper employee attitude, and dispensing of medications. Upon completion, students should be able to demonstrate an understanding of pharmacy operations, utilize references, dispense medications, prepare patient charges, and efficiently operate computers.

**PHM 138. Pharmacy Clinical. 8.0 Credits.** Class-0.0. Clinical-24.0. Lab-0.0. Work-0.0

This course provides an opportunity to work in pharmacy settings under a pharmacist's supervision. Emphasis is placed on effective communication with personnel, developing proper employee attitude, and dispensing of medications. Upon completion, students should be able to demonstrate an understanding of pharmacy operations, utilize references, dispense medications, prepare patient charges, and efficiently operate computers.

**PHM 140. Trends in Pharmacy. 2.0 Credits.** Class-2.0. Clinical-0.0. Lab-0.0. Work-0.0

This course covers the major issues, trends, and concepts in contemporary pharmacy practice. Topics include professional ethics, continuing education, job placement, and the latest developments in pharmacy technician practice. Upon completion, students should be able to demonstrate a basic knowledge of the topics discussed. Prerequisites: Take PHM 110 with a minimum grade of C

**PHM 150. Hospital Pharmacy. 4.0 Credits.** Class-3.0. Clinical-0.0. Lab-3.0. Work-0.0

This course provides an in-depth study of hospital pharmacy practice. Topics include hospital organizational structure, committee functions, utilization of reference works, purchasing and inventory control, drug delivery systems, and intravenous admixture preparation. Upon completion, students should be able to explain hospital organization/committee functions, interpret and enter patient orders, fill unit-dose cassettes, and prepare intravenous admixtures. Corequisites: Take PHM 118 Minimum grade C

**PHM 155. Community Pharmacy. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0

This course covers the operational procedures relating to retail pharmacy. Emphasis is placed on a general knowledge of over-the-counter products, prescription processing, business/inventory management, and specialty patient services. Upon completion, students should be able to provide technical assistance and support to the retail pharmacist.

**PHM 160. Pharm Dosage Forms. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course is a study of pharmaceutical dosage forms and considerations in their manufacture. Topics include bioavailability, routes of administration, tablets, capsules, solutions, syrups, suspensions, elixirs, aerosols, transdermals, topicals, ophthalmics, otics, and other dosage forms. Upon completion, students should be able to describe the characteristics of the major dosage forms and explain how these characteristics affect the action of the drug.

**PHM 165. Pharmacy Prof Practice. 2.0 Credits.** Class-2.0. Clinical-0.0. Lab-0.0. Work-0.0

This course provides a general overview of all aspects of pharmacy technician practice. Emphasis is placed on pharmacy law, calculations, compounding, pharmacology, and pharmacy operations. Upon completion, students should be able to demonstrate competence in the areas required for the Pharmacy Technician Certification Examination.

**PHM 265. Professional Issues. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course provides a comprehensive discussion of topics common to the practice of the pharmacy technician. Emphasis is placed on application of professional competencies including legal/ethical issues, leadership/management concepts and employability skills. Upon completion, students should be able to demonstrate competence in pharmacy workplace skills and leadership/management roles.

Prerequisites: Take PHM 165 Minimum grade C

## Philosophy (PHI)

**PHI 215. Philosophical Issues. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course introduces fundamental issues in philosophy considering the views of classical and contemporary philosophers. Emphasis is placed on knowledge and belief, appearance and reality, determinism and free will, faith and reason, and justice and inequality. Upon completion, students should be able to identify, analyze, and critically evaluate the philosophical components of an issue. Students seeking to take this course to meet the college transfer humanities requirement may also take PHI 240 (no PHI prerequisites).

Prerequisites: Take ENG 111 Minimum grade C

**PHI 220. Western Philosophy I. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course covers Western intellectual and philosophic thought from the early Greeks through the medievalists. Emphasis is placed on such figures as the pre-Socratics, Plato, Aristotle, Epicurus, Epictetus, Augustine, Suarez, Anselm, and Aquinas. Upon completion, students should be able to trace the development of leading ideas regarding reality, knowledge, reason, and faith.

Prerequisites: Take ENG 111 Minimum grade C

**PHI 221. Western Philosophy II. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course covers Western intellectual and philosophic thought from post-medievalists through recent thinkers. Emphasis is placed on such figures as Descartes, Spinoza, Leibnitz, Locke, Berkeley, Hume, Kant, Hegel, Marx, Mill, and representatives of pragmatism, logical positivism, and existentialism. Upon completion, students should be able to trace the development of leading ideas concerning knowledge, reality, science, society, and the limits of reason.

Prerequisites: Take ENG 111 Minimum grade C

**PHI 230. Introduction to Logic. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course introduces basic concepts and techniques for distinguishing between good and bad reasoning. Emphasis is placed on deduction, induction, validity, soundness, syllogisms, truth functions, predicate logic, analogical inference, common fallacies, and scientific methods. Upon completion, students should be able to analyze arguments, distinguish between deductive and inductive arguments, test validity, and appraise inductive reasoning.

Prerequisites: Take ENG 111 Minimum grade C

**PHI 240. Introduction to Ethics. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course introduces theories about the nature and foundations of moral judgments and applications to contemporary moral issues. Emphasis is placed on moral theories such as consequentialism, deontology, and virtue ethics. Upon completion, students should be able to apply various ethical theories to moral issues such as abortion, capital punishment, poverty, war, terrorism, the treatment of animals, and issues arising from new technologies. Students seeking to take this course to meet the college transfer humanities requirement may also take PHI 215 (no PHI prerequisites).

Prerequisites: Take ENG 111 Minimum grade C

## Physical Education (PED)

**PED 110. Fit and Well for Life. 2.0 Credits.** Class-1.0. Clinical-0.0. Lab-2.0. Work-0.0

This course is designed to investigate and apply the basic concepts and principles of lifetime physical fitness and other health-related factors. Emphasis is placed on wellness through the study of nutrition, weight control, stress management, and consumer facts on exercise and fitness. Upon completion, students should be able to plan a personal, lifelong fitness program based on individual needs, abilities, and interests.

**PED 111. Physical Fitness I. 1.0 Credit.** Class-0.0. Clinical-0.0. Lab-3.0. Work-0.0

This course provides an individualized approach to physical fitness utilizing the five major components. Emphasis is placed on the scientific basis for setting up and engaging in personalized physical fitness programs. Upon completion, students should be able to set up and implement an individualized physical fitness program.

**PED 113. Aerobics I. 1.0 Credit.** Class-0.0. Clinical-0.0. Lab-3.0. Work-0.0

This course introduces a program of cardiovascular fitness involving continuous, rhythmic exercise. Emphasis is placed on developing cardiovascular efficiency, strength, and flexibility and on safety precautions. Upon completion, students should be able to select and implement a rhythmic aerobic exercise program.

**PED 117. Weight Training I. 1.0 Credit.** Class-0.0. Clinical-0.0. Lab-3.0. Work-0.0

This course introduces the basics of weight training. Emphasis is placed on developing muscular strength, muscular endurance, and muscle tone. Upon completion, students should be able to establish and implement a personal weight training program.

**PED 121. Walk, Jog, Run. 1.0 Credit.** Class-0.0. Clinical-0.0. Lab-3.0. Work-0.0

This course covers the basic concepts involved in safely and effectively improving cardiovascular fitness. Emphasis is placed on walking, jogging, or running as a means of achieving fitness. Upon completion, students should be able to understand and appreciate the benefits derived from these activities.

**PED 122. Yoga I. 1.0 Credit.** Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0

This course introduces the basic discipline of yoga. Topics include proper breathing, relaxation techniques, and correct body positions. Upon completion, students should be able to demonstrate the procedures of yoga.

**PED 128. Golf-Beginning. 1.0 Credit.** Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0

This course emphasizes the fundamentals of golf. Topics include the proper grips, stance, alignment, swings for the short and long game, putting, and the rules and etiquette of golf. Upon completion, students should be able to perform the basic golf shots and demonstrate a knowledge of the rules and etiquette of golf.

**PED 152. Swimming-Beginning. 1.0 Credit.** Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0

This course is designed for non-swimmers and beginners. Emphasis is placed on developing confidence in the water, learning water safety, acquiring skills in floating, and learning elementary strokes. Upon completion, students should be able to demonstrate safety skills and be able to tread water, back float, and use the crawl stroke for 20 yards.



**PED 163. Kayaking-Basic. 1.0 Credit.** Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0

This course is designed to teach the basic skills of kayaking. Topics include forward and reverse strokes, sweeps, Eskimo roll, and self-rescue skills. Upon completion, students should be able to maneuver and demonstrate safe kayaking practices.

**PED 169. Orienteering. 1.0 Credit.** Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0

This course introduces the various types of orienteering and proper orienteering techniques. Emphasis is placed on defining various types of orienteering and recognizing and drawing topographic map symbols. Upon completion, students should be able to draw topographic map symbols and negotiate a 3-5 km cross-country orienteering course in a specified time period.

**PED 170. Backpacking. 1.0 Credit.** Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0

This course covers the proper techniques for establishing a campsite, navigating in the wilderness, and planning for an overnight trip. Topics include planning for meals, proper use of maps and compass, and packing and dressing for extended periods in the outdoors. Upon completion, students should be able to identify quality backpacking equipment, identify the principles of no-trace camping, and successfully complete a backpacking experience.

**PED 173. Rock Climbing. 1.0 Credit.** Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0

This course teaches the fundamental skills and safety of rock climbing. Topics include rock climbing, bouldering, rappelling, the correct method of belaying for climbing and rappelling, and knowledge of equipment. Upon completion, students should be able to demonstrate strong and skillful techniques in climbing and rappelling.

## Physical Science (PHS)

**PHS 110. Survey of Physical Science. 4.0 Credits.** Class-3.0. Clinical-0.0. Lab-2.0. Work-0.0

This course introduces the physical environment with emphasis on the laws and physical concepts that impact the world and universe. Topics include astronomy, geology, meteorology, general chemistry, and general physics. Upon completion, students should be able to describe the forces and composition of the earth and universe.

## Physical Therapy (PTA)

**PTA 110. Intro to Physical Therapy. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0

This course introduces the field of physical therapy including the history and standards of practice for the physical therapist assistant and basic treatment techniques. Emphasis is placed on ethical and legal considerations, universal precautions, vital signs, documentation, basic patient preparation and treatment skills, and architectural barrier screening. Upon completion, students should be able to explain the role of the physical therapist assistant and demonstrate competence in basic techniques of patient care.

Prerequisites: Take BIO 168 with a minimum grade of C

Corequisites: Take PTA 125

**PTA 125. Gross & Functional Anatomy. 5.0 Credits.** Class-3.0. Clinical-0.0. Lab-6.0. Work-0.0

This course provides an in-depth, clinically oriented survey of gross and functional anatomy. Emphasis is placed on musculoskeletal and nervous systems and clinical biomechanics, including goniometry, basic manual muscle testing, and components of normal gait. Upon completion, students should be able to identify specific anatomical structures and describe, observe, and measure musculoskeletal posture and function.

Prerequisites: Take BIO 165 or BIO 168 Minimum grade C

Corequisites: Take PTA 110 Minimum grade C

**PTA 135. Pathology. 4.0 Credits.** Class-4.0. Clinical-0.0. Lab-0.0. Work-0.0

This course introduces principles of pathology, processes of and normal responses to injury and disease, and changes related to aging. Emphasis is placed on conditions most commonly treated in physical therapy.

Upon completion, students should be able to discuss basic pathological processes and identify etiology, signs, symptoms, complications, treatment options, and prognoses of specific orthopedic conditions.

Prerequisites: Complete one of the following options: Take BIO 166 PTA 110 PTA 125 with a minimum grade of C

Take BIO 169 PTA 110 PTA 125 with a minimum grade of C

Corequisites: Take PTA 215 Minimum grade C

**PTA 145. Therapeutic Procedures. 4.0 Credits.** Class-2.0. Clinical-0.0. Lab-6.0. Work-0.0

This course provides a detailed study of specific treatment procedures and the physiological principles and techniques involved. Emphasis is placed on the correct application of superficial heat and cold, massage and soft tissue mobilization, ultrasound, diathermy, traction, and electrical stimulation. Upon completion, students should be able to demonstrate competence in the application of these modalities and explain the indications, contraindications, effects, and precautions for each.

Prerequisites: Complete one of the following options: Take BIO 166 PTA 110 PTA 125 with a minimum grade of C

Take BIO 169 PTA 110 PTA 125 with a minimum grade of C

Corequisites: Take PTA 222 Minimum grade C

**PTA 165. PTA Clinical I. 3.0 Credits.** Class-0.0. Clinical-9.0. Lab-0.0. Work-0.0

This course provides the opportunity to gain clinical experience and apply academic skills and knowledge to patient care. Emphasis is placed on performing patient care skills, observation and measurement, and professional and patient interaction. Upon completion, students should be able to demonstrate safe and effective clinical practice as measured by a standardized performance evaluation.

Prerequisites: Take PTA 135 PTA 145 PTA 215 PTA 222 with a minimum grade of C

Corequisites: Take PTA 185

**PTA 185. PTA Clinical II. 3.0 Credits.** Class-0.0. Clinical-9.0. Lab-0.0. Work-0.0

This course provides the opportunity to gain clinical experience and apply academic skills and knowledge to patient care. Emphasis is placed on performing patient care skills, observation and measurement, and professional and patient interaction. Upon completion, students should be able to demonstrate safe and effective clinical practice as measured by a standardized performance evaluation.

Prerequisites: Take PTA 135 PTA 145 PTA 215 PTA 222 with a minimum grade of C

Corequisites: Take PTA 165

**PTA 212. Health Care/Resources. 2.0 Credits.** Class-2.0. Clinical-0.0. Lab-0.0. Work-0.0

This course provides an overview of various aspects of health care delivery systems and the interrelationships of health care team members. Topics include health agencies and their functions, health care team member roles, management, and other health care issues. Upon completion, students should be able to discuss the functions of health organizations and team members and aspects of health care affecting physical therapy delivery.

Prerequisites: Take PTA 225 PTA 235AB PTA 165 PTA 185 with a minimum grade of C

Corequisites: Take PTA 235BB

**PTA 215. Therapeutic Exercise. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0

This course introduces basic concepts of strengthening, endurance, and flexibility exercise and balance, gait, and posture training. Emphasis is placed on applying techniques to the treatment of orthopedic conditions. Upon completion, students should be able to safely and effectively execute basic exercise programs and balance, gait, and posture training.

Prerequisites: Complete one of the following options: Take BIO 166 PTA 110 PTA 125 with a minimum grade of C

Take BIO 169 PTA 110 PTA 125 with a minimum grade of C

Corequisites: Take PTA 135 Minimum grade C

**PTA 222. Professional Interactions. 2.0 Credits.** Class-2.0. Clinical-0.0. Lab-0.0. Work-0.0

This course is designed to assist in the development of effective interpersonal skills in the physical therapist assistant setting. Topics include reactions to disability, the grieving process, methods of communication, motivation, health promotion, disease prevention, and aging. Upon completion, students should be able to discuss and demonstrate methods for achieving effective interaction with patients, families, the public, and other health care providers.

Prerequisites: Take 1 group Take BIO 166 PTA 110 PTA 125 with a minimum grade of

C Take BIO 169 PTA 110 PTA 125 with a minimum grade of C

Corequisites: Take PTA 145 Minimum grade C

**PTA 225. Intro to Rehabilitation. 4.0 Credits.** Class-3.0. Clinical-0.0. Lab-3.0. Work-0.0

This course covers cardiovascular, pulmonary, and integumentary conditions, as well as causes and treatment of amputations. Emphasis is placed upon pathological processes as well as comprehensive treatment of the various conditions studied. Upon completion, students should be able to discuss etiology, signs, symptoms, complications, and prognoses of various conditions and implement components of a comprehensive treatment program.

Prerequisites: Take PTA 135 PTA 145 PTA 215 PTA 222 with a minimum grade of C

Corequisites: Take PTA 235AB

**PTA 235AB. Neurological Rehab. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0

This course covers neurological and neuromuscular conditions experienced throughout the life span. Topics include the pathology of selected conditions and the methods and rationales of various treatment approaches. Upon completion, students should be able to discuss etiology, signs, symptoms, complications, and prognoses of various conditions and implement components of a comprehensive treatment program. This is the first part of a course sequence consisting of an in-depth study of the neurological system and focusing on conditions affecting it in adulthood.

Prerequisites: Take PTA 135 PTA 145 PTA 215 PTA 222 with a minimum grade of C

Corequisites: Take PTA 225

**PTA 235BB. Neurological Rehab. 2.0 Credits.** Class-1.0. Clinical-0.0. Lab-3.0. Work-0.0

This course covers neurological and neuromuscular conditions experienced throughout the life span. Topics include the pathology of selected conditions and the methods and rationales of various treatment approaches. Upon completion, students should be able to discuss etiology, signs, symptoms, complications, and prognoses of various conditions and implement components of a comprehensive treatment program.

Prerequisites: Take PTA 225 PTA 235AB PTA 165 PTA 185 with a minimum grade of C

Corequisites: Take PTA 212

**PTA 235. Neurological Rehab. 5.0 Credits.** Class-3.0. Clinical-0.0. Lab-6.0. Work-0.0

This course covers neurological and neuromuscular conditions experienced throughout the life span. Topics include the pathology of selected conditions and the methods and rationales of various treatment approaches. Upon completion, students should be able to discuss etiology, signs, symptoms, complications, and prognoses of various conditions and implement components of a comprehensive treatment program.

**PTA 245. PTA Clinical III. 4.0 Credits.** Class-0.0. Clinical-12.0. Lab-0.0. Work-0.0

This course provides the opportunity to gain clinical experience and apply academic skills and knowledge to patient care. Emphasis is placed on performing patient care skills, observation and measurement, and professional and patient interaction. Upon completion, students should be able to demonstrate safe and effective clinical practice as measured by a standardized performance evaluation.

Prerequisites: Take PTA 225 PTA 235AB PTA 165 PTA 185 with a minimum grade of C

Corequisites: Take PTA 255

**PTA 255. PTA Clinical IV. 4.0 Credits.** Class-0.0. Clinical-12.0. Lab-0.0. Work-0.0

This course provides the opportunity to gain clinical experience and apply academic skills and knowledge to patient care. Emphasis is placed on performing patient care skills, observation and measurement, and professional and patient interaction. Upon completion, students should be able to demonstrate safe and effective clinical practice as measured by a standardized performance evaluation.

Prerequisites: Take PTA 225 PTA 235AB PTA 165 PTA 185 with a minimum grade of C

Corequisites: Take PTA 245 and PTA 270

**PTA 270. PTA Topics. 1.0 Credit.** Class-1.0. Clinical-0.0. Lab-0.0. Work-0.0

This course covers the physical therapist assistant profession in preparation for the state licensure exam. Topics include developing time management skills and practicing for the competence examinations. Upon completion, students should be able to identify individual academic strengths and weaknesses and utilize this information to continue self-study for the licensure exam.

Prerequisites: Take PTA 225 PTA 235AB PTA 165 PTA 185 with a minimum grade of C

Corequisites: Take PTA 255

## Physics (PHY)

**PHY 110. Conceptual Physics. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course provides a conceptually-based exposure to the fundamental principles and processes of the physical world. Topics include basic concepts of motion, forces, energy, heat, electricity, magnetism, and the structure of matter and the universe. Upon completion, students should be able to describe examples and applications of the principles studied.

Corequisites: Take PHY 110A

**PHY 110A. Conceptual Physics Lab. 1.0 Credit.** Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0

This course is a laboratory for PHY 110. Emphasis is placed on laboratory experiences that enhance materials presented in PHY 110. Upon completion, students should be able to apply the laboratory experiences to the concepts presented in PHY 110.

Corequisites: Take PHY 110

**PHY 131. Physics-Mechanics. 4.0 Credits.** Class-3.0. Clinical-0.0. Lab-2.0. Work-0.0

This algebra/trigonometry-based course introduces fundamental physical concepts as applied to engineering technology fields. Topics include systems of units, problem-solving methods, graphical analysis, vectors, motion, forces, Newton's laws of motion, work, energy, power, momentum, and properties of matter. Upon completion, students should be able to apply the principles studied to applications in engineering technology fields. Credit by exam for PHS 151 can be obtained by request upon completion.

Prerequisites: Take MAT 121 or MAT 171

**PHY 132. Physics-Electricity & Magnetism. 4.0 Credits.** Class-3.0. Clinical-0.0. Lab-2.0. Work-0.0

This algebra/trigonometry-based course is a study of fundamental physical concepts as applied to engineering technology fields. Topics include systems of units, problem-solving methods, graphical analysis, waves, electricity, magnetism, circuits, transformers, motors, and generators.

Upon completion, students should be able to apply the principles studied to applications in engineering technology fields.

Prerequisites: Take PHY 131 Minimum grade C

**PHY 151. College Physics I. 4.0 Credits.** Class-3.0. Clinical-0.0. Lab-2.0. Work-0.0

This course uses algebra- and trigonometry-based mathematical models to introduce the fundamental concepts that describe the physical world. Topics include units and measurement, vectors, linear kinematics and dynamics, energy, power, momentum, fluid mechanics, and heat. Upon completion, students should be able to demonstrate an understanding of the principles involved and display analytical problem-solving ability for the topics covered. This course has been approved to satisfy the comprehensive articulation agreement general education core requirement in natural sciences/Mathematics.

Prerequisites: Take One: MAT 171 or MAT 271

**PHY 152. College Physics II. 4.0 Credits.** Class-3.0. Clinical-0.0. Lab-2.0. Work-0.0

This course uses algebra- and trigonometry-based mathematical models to introduce the fundamental concepts that describe the physical world. Topics include electrostatic forces, electric fields, electric potentials, direct-current circuits, magnetostatic forces, magnetic fields, electromagnetic induction, alternating-current circuits, and light. Upon completion, students should be able to demonstrate an understanding of the principles involved and display analytical problem-solving ability for the topics covered.

Prerequisites: Take PHY 151 Minimum grade C

**PHY 251. General Physics I. 4.0 Credits.** Class-3.0. Clinical-0.0. Lab-3.0. Work-0.0

This course uses calculus-based mathematical models to introduce the fundamental concepts that describe the physical world. Topics include units and measurement, vector operations, linear kinematics and dynamics, energy, power, momentum, rotational mechanics, periodic motion, fluid mechanics, and heat. Upon completion, students should be able to demonstrate an understanding of the principles involved and display analytical problem-solving ability for the topics covered.

Prerequisites: Take MAT 271

Corequisites: Take MAT 272

**PHY 252. General Physics II. 4.0 Credits.** Class-3.0. Clinical-0.0. Lab-3.0. Work-0.0

This course uses calculus-based mathematical models to introduce the fundamental concepts that describe the physical world. Topics include electrostatic forces, electric fields, electric potentials, direct-current circuits, magnetostatic forces, magnetic fields, electromagnetic induction, alternating-current circuits, and light. Upon completion, students should be able to demonstrate an understanding of the principles involved and display analytical problem-solving ability for the topics covered.

Prerequisites: Take MAT 272 and PHY 251 Minimum grade C

## Political Science (POL)

**POL 110. Introduction to Political Science. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course introduces basic political concepts used by governments and addresses a wide range of political issues. Topics include political theory, ideologies, legitimacy, and sovereignty in democratic and non-democratic systems. Upon completion, students should be able to discuss a variety of issues inherent in all political systems and draw logical conclusions in evaluating these systems.

Prerequisites: Complete one of the following options: Take DRE 098

Take EFL 111 EFL 112 with a minimum grade of C

Take ENG 111 with a minimum grade of C

**POL 120. American Government. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course is a study of the origins, development, structure, and functions of American government. Topics include the constitutional framework, federalism, the three branches of government including the bureaucracy, civil rights and liberties, political participation and behavior, and policy process. Upon completion, students should be able to demonstrate an understanding of the basic concepts and participatory processes of the American political system. This course is intended for all associate degree programs.

Prerequisites: Complete one of the following options: Take DRE 098

Take EFL 111 EFL 112 with a minimum grade of C

Take ENG 111 with a minimum grade of C

**POL 210. Comparative Government. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course provides a cross-national perspective on the government and politics of contemporary nations such as Great Britain, France, Germany, and Russia. Topics include each country's historical uniqueness, key institutions, attitudes and ideologies, patterns of interaction, and current political problems. Upon completion, students should be able to identify and compare various nations' governmental structures, processes, ideologies, and capacity to resolve major problems.

Prerequisites: Complete one of the following options: Take DRE 098

Take EFL 111 EFL 112 with a minimum grade of C

Take ENG 111 with a minimum grade of C

**POL 220. International Relations. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course provides a study of the effects of ideologies, trade, armaments, and alliances on relations among nation-states. Emphasis is placed on regional and global cooperation and conflict, economic development, trade, non-governmental organizations, and international institutions such as the World Court and UN. Upon completion, students should be able to identify and discuss major international relationships, institutions, and problems.

Prerequisites: Complete one of the following options: Take DRE 098

Take EFL 111 EFL 112 with a minimum grade of C

Take ENG 111 with a minimum grade of C

## Poysomnography (PSG) Courses

**PSG 110. Intro to Polysomnography. 4.0 Credits.** Class-3.0. Clinical-0.0. Lab-2.0. Work-0.0

This course introduces the polysomnography profession. Topics include the history of the profession and role of the polysomnographic technologist, communication, time management, infection control, basic patient assessment, and medical gas therapy. Upon completion, students should be able to demonstrate competence in concepts through written and laboratory evaluations.

**PSG 111. Neuro/Cardiopulmonary A&P. 4.0 Credits.** Class-4.0. Clinical-0.0. Lab-0.0. Work-0.0

This course provides a concentrated study of anatomy and physiology essential to the practice of polysomnography. Emphasis is placed on the physiology of the nervous, cardiovascular, and pulmonary systems and basic pharmacological principles. Upon completion, students should be able to demonstrate competence in concepts through written evaluation.

Prerequisites: Complete one of the following options:

- Take BIO 163
- Take BIO 165 and BIO 166
- Take BIO 168 and BIO 169

**PSG 112. Polysomnography Fundamentals. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course provides the knowledge and skills necessary to manage/function in a polysomnographic laboratory. Topics include recordkeeping, scheduling techniques, creation/implementation of departmental policies, reimbursement, the technologist's role as sleep advocate, and case management/patient education. Upon completion, students should be able to demonstrate competence in concepts through written evaluation.

**PSG 113. Polysomnography Instrumentation. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0

This course introduces the fundamental concepts of sleep technology electrical equipment and recording of bio-electric potentials. Topics include Ohm's Law; common mode rejection; components related to recording bio-electric potentials; function and application of sleep technology equipment; and construct/verify montages. Upon completion, students should be able to demonstrate competence in polysomnography equipment, instrumentation, recording of bioelectric potential concepts, and ancillary electrical signals through written and laboratory evaluations.

Prerequisites: Take PSG 110

**PSG 114. Polysomnography Clinical Education I. 3.0 Credits.** Class-0.0. Clinical-9.0. Lab-0.0. Work-0.0

This course provides orientation to the polysomnography clinical environment. Emphasis is placed on work flows, reviewing patient charts and orders, patient preparation and hook-ups, and proper time management. Upon completion, students should be able to demonstrate successful completion of polysomnography clinical learning outcomes.

Prerequisites: Take PSG 110

**PSG 210. Polysomnography I. 7.0 Credits.** Class-3.0. Clinical-9.0. Lab-2.0. Work-0.0

This course provides entry-level didactic, laboratory, and clinical training in polysomnography. Emphasis is placed on medical terminology, instrumentation setup and calibration, recording and monitoring techniques, and patient-technologist interactions. Upon completion, students should be able to demonstrate competence in concepts and procedures through written, laboratory and clinical evaluations.

Prerequisites: Take One: PSG 111 or PSG 189

**PSG 211. Polysomnography II. 7.0 Credits.** Class-2.0. Clinical-9.0. Lab-6.0. Work-0.0

This course provides advanced-level didactic, laboratory, and clinical training in polysomnography. Emphasis is placed on the knowledge and skills necessary to obtain and evaluate high quality sleep recordings. Upon completion, students should be able to demonstrate competence in concepts and procedures through written, laboratory and clinical evaluations.

Prerequisites: Take PSG 210

**PSG 212. Infant/Pediatric Polysomnography. 4.0 Credits.** Class-3.0. Clinical-0.0. Lab-2.0. Work-0.0

This course provides the knowledge and skills to perform and score polysomnographic procedures on infants and pediatric patients. Emphasis is placed on infant/pediatric assessment, monitoring, and sleep disorders. Upon completion, students should be able to demonstrate competence in concepts through written and laboratory evaluations.

**PSG 213. Case Study/Exam Review. 1.0 Credit.** Class-0.0. Clinical-0.0. Lab-3.0. Work-0.0

This course provides an opportunity to review clinical cases and prepare for the polysomnography credentialing exam. Emphasis is placed on case management and review for the Registered Polysomnographic Technologist Exam. Upon completion, students should be able to successfully complete practice exams.



**PSG 214. PSG Clinical Applications I. 1.0 Credit.** Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0

This course provides practical application of theories covered in previous PSG courses. Emphasis is placed on polysomnography testing and procedures. Upon completion, students should be able to demonstrate competence through laboratory evaluation.

**PSG 215. PSG Clinical Applications II. 1.0 Credit.** Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0

This course provides practical application of theories covered in previous PSG courses. Emphasis is placed on polysomnography testing and procedures. Upon completion, students should be able to demonstrate competence through laboratory evaluation.

## Printing (PRN)

**PRN 131. Flexography I. 4.0 Credits.** Class-2.0. Clinical-0.0. Lab-4.0. Work-0.0

This course provides basic hands-on instruction in flexographic image preparation, platemaking, mounting, and printing. Emphasis is placed on taking press measurements, making and mounting plates, and obtaining quality in press operation on a narrow-web press. Upon completion, students should be able to describe and perform flexographic production procedures in pre-press, press setup, press operation, and die-cutting.

**PRN 132. Flexography II. 4.0 Credits.** Class-2.0. Clinical-0.0. Lab-4.0. Work-0.0

This course is a continuation of PRN 131 and introduces wide-web presses. Emphasis is placed on troubleshooting press problems, color matching, parts identification, make-ready, and setup of narrow-web, wide-web, or corrugated presses. Upon completion, students should be able to produce advanced projects involving all flexographic production phases. This course is a unique concentration requirement in the Flexography concentration in the Graphic Arts and Imaging Technology program. Prerequisites: Take PRN 131

**PRN 155. Screen Printing I. 2.0 Credits.** Class-1.0. Clinical-0.0. Lab-3.0. Work-0.0

This course covers screen printing techniques and materials. Topics include methods, materials, design, and image and stencil preparation techniques. Upon completion, students should be able to produce single- or multi-color projects.

**PRN 156. Screen Printing II. 2.0 Credits.** Class-1.0. Clinical-0.0. Lab-3.0. Work-0.0

This course is a continuation of PRN 155. Emphasis is placed on advanced techniques and current industry practices. Upon completion, students should be able to produce multi-color projects utilizing various photographic stencil methods and substrates. Prerequisites: Take PRN 155

**PRN 171. Introduction to Brand Protection and Anti-Counterfeiting Technology. 2.0 Credits.** Class-2.0. Clinical-0.0. Lab-0.0. Work-0.0

This course is designed to address the fundamental aspects of the problem of counterfeiting in the modern printing and packaging industry. Topics include current levels of security, global impact of counterfeiting, identification of counterfeit materials, how products are attacked, technology solutions available for infringement reduction, introducing brand protection to clients, and industry standards related to security printing. Upon completion, students should be able to: identify areas of security risk related to a brand, be able to develop a plan to help protect a brand from infringement, describe available technologies to combat infringement, and reference the standards related to security printing.

**PRN 221. Offset Press Operations. 3.0 Credits.** Class-1.0. Clinical-0.0. Lab-4.0. Work-0.0

This course covers advanced lithographic theory and provides extensive hands-on operating experience. Emphasis is placed on make-ready, press operation, maintenance, and troubleshooting of multi-color jobs on sheet-fed offset presses and duplicators. Upon completion, students should be able to set up, run, maintain, and produce commercial-quality multi-color work.

**PRN 231. Flexography III. 4.0 Credits.** Class-2.0. Clinical-0.0. Lab-4.0. Work-0.0

This course is a continuation of PRN 132. Emphasis is placed on the products made and processes used in the industry. Upon completion, students should be able to demonstrate an understanding of advanced production techniques of flexographic products. This course is a unique concentration requirement in the Flexography concentration in the Graphic Arts and Imaging Technology program.

Prerequisites: Take PRN 132

**PRN 232. Flexography IV. 4.0 Credits.** Class-2.0. Clinical-0.0. Lab-4.0. Work-0.0

This course provides opportunities for advanced and specialized study in flexography. Emphasis is placed on specialized product design and production. Upon completion, students should be able to demonstrate an understanding of the comprehensive scope of the flexographic industry, products, and processes. This course is a unique concentration requirement in the Flexography concentration in the Graphic Arts and Imaging Technology program.

Prerequisites: Take PRN 231

**PRN 240. Print Estimating/Planning. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course covers printing economics, development of cost centers, job flow throughout departments, and material and labor costs. Topics include budgeted, hourly, cost-rate derivation; production standards and data; and analysis of other estimating procedures including computer-assisted estimating. Upon completion, students should be able to demonstrate an understanding of economic factors of the printing industry and determine all production costs of printed jobs. This course is a unique concentration requirement in the Flexography concentration in the Graphic Arts and Imaging Technology program.

Prerequisites: Take GRA 121

**PRN 241. Flexo Applications I. 4.0 Credits.** Class-2.0. Clinical-0.0. Lab-4.0. Work-0.0

This course provides an opportunity to specialize in certain applications in flexographic printing. Emphasis is placed on understanding color and production concerns in order to produce products. Upon completion, students should be able to troubleshoot color problems during printing and relate them to the production procedures. This course is a unique concentration requirement in the Flexography concentration in the Graphic Arts and Imaging Technology program.

Prerequisites: Take All: GRA 152 and PRN 131

**PRN 242. Flexo Applications II. 4.0 Credits.** Class-2.0. Clinical-0.0. Lab-4.0. Work-0.0

This course provides an opportunity to produce comprehensive projects, including color work on special substrates using specialty inks. Emphasis is placed on compensation for press limitations to produce high-quality color products. Upon completion, students should be able to produce color images on a variety of substrates and troubleshoot and solve production problems. This course is a unique concentration requirement in the Flexography concentration in the Graphic Arts and Imaging Technology program.

Prerequisites: Take All: PRN 241, GRA 153, and GRA 255

**PRN 271. Graphic Imaging for Brand Protection and Anti-Counterfeiting Technology. 2.0 Credits.** Class-1.0. Clinical-0.0. Lab-2.0. Work-0.0

This course is designed to address the utilization of specialized software to develop secure packaging and documents that are used in the protection of trademarks and branding. Topics include the utilization of software to develop secure elements to be incorporated in packaging and documentations, development of a plan utilizing overt and covert security elements to prevent duplication, and creation of layouts for various packaging and documentation related to the security printing industry. Upon completion, students should be able to use software to develop secure elements to be utilized in packaging and documentation, create a strategy for a brand that is designed to prevent counterfeiting, create and design various packaging and documentation in relationship to the security printing industry and reference the industry standards as they pertain to pre-press for security printing.

Prerequisites: Take All: GRA 121, PRN 131 and PRN 171

**PRN 272. Brand Protection and Anti-Counterfeiting Technology Implementation. 3.0 Credits.** Class-1.0. Clinical-0.0. Lab-4.0. Work-0.0

This course is designed to provide students with the knowledge needed to work within a secure facility and produce products that have built in security technology designed to prevent brand infringement. Topics include the handling, transporting, storing, and tracking secure materials, testing print device's limitations to accurately produce secure products, operating a printing device to produce products with security technology built into the product, and understanding the culture of security printing. Upon completion, students should be able to demonstrate appropriate demeanor for a secure facility, track and maintain all secure print materials, operate multiple printing devices to the quality standards of the secure print industry, and be able to produce printed products with security technology built into the product.

Prerequisites: Take All: GRA 121, PRN 131, and PRN 171

## Process Control Instrumentation (PCI)

**PCI 162. Instrumentation Controls. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0

This course surveys industrial process control instrumentation concepts, devices, and systems. Topics include process control devices and process control applications associated with industrial instrumentation. Upon completion, students should be able to demonstrate a basic understanding of the various industrial process control and instrumentation systems.

Prerequisites: Take ELC 213

**PCI 170. DAQ and Control. 4.0 Credits.** Class-3.0. Clinical-0.0. Lab-3.0. Work-0.0

This course is a survey of data acquisition and control applications in an industrial setting. Topics include remote I/O systems, PC-based data acquisition, real-time monitoring, and other related topics. Upon completion, students should be able to demonstrate an understanding of data acquisition circuits.

Prerequisites: Take ELN 133

**PCI 172. SCADA Systems. 4.0 Credits.** Class-3.0. Clinical-0.0. Lab-3.0. Work-0.0

This course is a survey of SCADA systems found in the industrial setting. Topics include single and/or multiple machine operator interfaces utilizing hardware and software systems running SCADA or HMI software for system monitoring and control. Upon completion, students should be able to demonstrate an understanding of the utilization and implementation of custom and commercial SCADA or HMI software.

Prerequisites: Take ELN 260

**PCI 173. Programmable Systems. 4.0 Credits.** Class-3.0. Clinical-0.0. Lab-3.0. Work-0.0

The course is a survey of various programmable systems used in industry. Topics include PLC systems, PAC systems, DCS systems, and embedded systems and other types of control systems implementation. Upon completion, students should be able to demonstrate an understanding of the programming, troubleshooting, maintenance and planning involved in control systems.

Prerequisites: Take ELN 260 Minimum grade C

## Psychology (PSY)

**PSY 150. General Psychology. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course provides an overview of the scientific study of human behavior. Topics include history, methodology, biopsychology, sensation, perception, learning, motivation, cognition, abnormal behavior, personality theory, social psychology, and other relevant topics. Upon completion, students should be able to demonstrate a basic knowledge of the science of psychology.

Prerequisites: Complete one of the following options: Take DRE 098

Take EFL 111 EFL 112 with a minimum grade of C

Take ENG 111 with a minimum grade of C

**PSY 211. Psychology of Adjustment. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course introduces the study of the adjustment process focusing on contemporary challenges individuals must deal with in everyday life. Topics include theories of behavior, career choices, self-understanding, coping mechanisms, human relationships, intimacy, sociocultural factors influencing healthy personal adjustment, and other related topics. Upon completion, students should be able to demonstrate an awareness of the processes of adjustment. This course introduces the study of the adjustment process focusing on contemporary challenges individuals must deal with in everyday life. Topics include theories of behavior, career choices, self-Understanding, coping mechanisms, human relationships, intimacy, socio-cultural factors influencing healthy personal adjustment, and other related topics. Upon completion, students should be able to demonstrate an awareness of the process of adjustment. This course is intended for all associate degree programs.

Prerequisites: Take PSY 150

**PSY 231. Forensic Psychology. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course introduces students to concepts which unite psychology and the legal system. Topics include defining competency, insanity, involuntary commitment, as well as introducing forensic assessment techniques, such as interviewing process, specialized assessments, and collecting collateral information. Upon completion, students should be able to demonstrate knowledge in areas of forensic psychology: risk assessment, criminal competencies, insanity, psychopathology, and mentally disordered offenders.

Prerequisites: Take PSY 150 Minimum grade C

**PSY 237. Social Psychology. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course introduces the study of individual behavior within social contexts. Topics include affiliation, attitude formation and change, conformity, altruism, aggression, attribution, interpersonal attraction, and group behavior. Upon completion, students should be able to demonstrate an understanding of the basic principles of social influences on behavior.

Prerequisites: Take PSY 150 or SOC 210 Minimum grade C

**PSY 241. Developmental Psychology. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course is a study of human growth and development. Emphasis is placed on major theories and perspectives as they relate to the physical, cognitive, and psychosocial aspects of development from conception to death. Upon completion, students should be able to demonstrate knowledge of development across the life span.

Prerequisites: Take PSY 150 Minimum grade C

**PSY 281. Abnormal Psychology. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course provides an examination of the various psychological disorders, as well as theoretical, clinical, and experimental perspectives of the study of psychopathology. Emphasis is placed on terminology, classification, etiology, assessment, and treatment of the major disorders. Upon completion, students should be able to distinguish between normal and abnormal behavior patterns as well as demonstrate knowledge of etiology, symptoms, and therapeutic techniques.

Prerequisites: Take PSY 150 Minimum grade C

## Race Car Technology (RCT)

**RCT 110. Introduction to Racing. 2.0 Credits.** Class-2.0. Clinical-0.0. Lab-0.0. Work-0.0

This course covers safe working practices for the shop and race track environments, various types of racing, race vehicles, and organizations that sponsor events. Topics include circle track racing, drag racing, road racing on asphalt and dirt, knowledge and personal motivation, and safety in the racing environment. Upon completion, students should demonstrate knowledge of the professional aspects of racing.

**RCT 121. Race Car Metal Inert Gas Welding. 3.0 Credits.** Class-1.0. Clinical-0.0. Lab-4.0. Work-0.0

This course introduces safety, proper setup, and operation of the gas metal arc welding process, also known as MIG welding. Topics include safety, equipment setup and minor repair, and operation of MIG welding equipment. Upon completion, students should be able to make industry-acceptable welds on flat plate, round, and box tubing made of mild carbon steel.

**RCT 254. Racing Chassis Fabrication. 5.0 Credits.** Class-2.0. Clinical-0.0. Lab-9.0. Work-0.0

This course covers racing chassis fabrication following either a professionally prepared blueprint or a personal design. Topics include cutting and fitting different types of tubing, and the proper use of specialized fabrication equipment necessary to build various race car components. Upon completion, students should be able to build a racing chassis with the correct geometric angles to racing industry standards.

Prerequisites: Take RCT 121

**RCT 255. Racing Sheet Metal Fabrication. 2.0 Credits.** Class-1.0. Clinical-0.0. Lab-3.0. Work-0.0

This course covers skills using various tools and equipment necessary to make interior and exterior sheet metal panels. Emphasis is placed on cutting, bending, and shaping sheet metal into the various parts necessary to build a race car. Upon completion, students should be able to fabricate, form, and fit various sheet metal components to racing industry standards.

## Religion (REL)

**REL 110. World Religions. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course introduces the world's major religious traditions. Topics include Primal religions, Hinduism, Buddhism, Islam, Judaism, and Christianity. Upon completion, students should be able to identify the origins, history, beliefs, and practices of the religions studied.

**REL 111. Eastern Religions. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course introduces the major Asian religious traditions. Topics include Hinduism, Buddhism, Taoism, Confucianism, and Shinto. Upon completion, students should be able to identify the origins, history, beliefs, and practices of the religions studied.

**REL 112. Western Religions. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course introduces the major western religious traditions. Topics include Zoroastrianism, Islam, Judaism, and Christianity. Upon completion, students should be able to identify the origins, history, beliefs, and practices of the religions studied.

**REL 211. Introduction to Old Testament. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course is a survey of the literature of the Hebrews with readings from the law, prophets, and other writings. Emphasis is placed on the use of literary, historical, archeological, and cultural analysis. Upon completion, students should be able to use the tools of critical analysis to read and understand Old Testament literature.

**REL 212. Introduction to New Testament. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course is a survey of the literature of first-century Christianity with readings from the gospels, Acts, and the Pauline and pastoral letters. Topics include the literary structure, audience, and religious perspective of the writings, as well as the historical and cultural context of the early Christian community. Upon completion, students should be able to use the tools of critical analysis to read and understand New Testament literature.

**REL 221. Religion in America. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course is an examination of religious beliefs and practice in the United States. Emphasis is placed on mainstream religious traditions and non-traditional religious movements from the Colonial period to the present. Upon completion, students should be able to recognize and appreciate the diversity of religious traditions in America.

## Respiratory Care (RCP)

**RCP 110. Intro to Respiratory Care. 4.0 Credits.** Class-3.0. Clinical-0.0. Lab-3.0. Work-0.0

This course introduces the role of the respiratory care practitioner within interprofessional teams and interacting with diverse populations. Topics include medical gas administration, basic patient assessment, infection control, and medical terminology using proper written and oral communication methods to prepare students for clinical practice. Upon completion, students should be able to demonstrate competence in respiratory therapy concepts and procedures through written and laboratory evaluations.

Prerequisites: Take BIO 163 BIO 165 BIO 166 BIO 168 or BIO 169 with a minimum grade of C

**RCP 111. Therapeutics/Diagnostics. 5.0 Credits.** Class-4.0. Clinical-0.0. Lab-3.0. Work-0.0

This course provides emphasis on therapeutic and diagnostic procedures. Topics include applying problem solving strategies in the patient care setting, applying ethical principles in decision making, and practicing professional responsibilities, which will prepare students for clinical practice. Upon completion, students should be able to demonstrate competence in respiratory therapy concepts and procedures through written and laboratory evaluations.

Prerequisites: Take RCP 110

**RCP 113. RCP Pharmacology. 2.0 Credits.** Class-2.0. Clinical-0.0. Lab-0.0. Work-0.0

This course covers the drugs used in the treatment of cardiopulmonary diseases. Emphasis is placed on the uses, actions, indications, administration, and hazards of pharmacological agents. Upon completion, students should be able to demonstrate competence through written evaluations.

Prerequisites: Take BIO 163, BIO 165, BIO 166, BIO 168, or BIO 169 with a minimum grade of C

Corequisites: Take RCP 110, RCP 114, RCP 122, and RCP 123

**RCP 114. C-P Anatomy & Physiology. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course provides a concentrated study of cardiopulmonary anatomy and physiology essential to the practice of respiratory care. Emphasis is placed on cardiovascular and pulmonary physiology, acid/base balance, and blood gas interpretation. Upon completion, students should be able to demonstrate competence in these concepts through written evaluation.

**RCP 115. C-P Pathophysiology. 2.0 Credits.** Class-2.0. Clinical-0.0. Lab-0.0. Work-0.0

This course introduces the etiology, pathophysiology, clinical signs and symptoms, diagnoses, prognoses, complications, and management of cardiopulmonary diseases. Emphasis is placed on developing, evaluating, and modifying respiratory care plans based on evidence-based medicine protocols and clinical practice guidelines. Upon completion, students should be able to demonstrate competence in cardio-pulmonary disease concepts through written evaluations.

**RCP 122. Special Practice Lab. 1.0 Credit.** Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0

This course provides additional laboratory learning opportunities in respiratory care. Emphasis is placed on therapeutic procedures and equipment management. Upon completion, students should be able to demonstrate competence in concepts and procedures through laboratory evaluations.

Prerequisites: Take BIO 163, BIO 165, BIO 166, BIO 168, or BIO 169 with a minimum grade of C

Corequisites: Take RCP 113, RCP 114, and RCP 123

**RCP 123. Special Practice Lab. 1.0 Credit.** Class-0.0. Clinical-0.0. Lab-3.0. Work-0.0

This course provides additional laboratory learning opportunities in respiratory care. Emphasis is placed on therapeutic procedures and equipment management. Upon completion, students should be able to demonstrate competence in concepts and procedures through laboratory evaluations.

Prerequisites: Take BIO 163, BIO 165, BIO 166, BIO 168, or BIO 169 with a minimum grade of C

Corequisites: Take RCP 113, RCP 114, and RCP 122

**RCP 145. RCP Clinical Practice II. 5.0 Credits.** Class-0.0. Clinical-15.0. Lab-0.0. Work-0.0

This course provides entry-level clinical experience. Emphasis is placed on therapeutic and diagnostic patient care. Upon completion, students should be able to demonstrate clinical competence in required performance evaluations.

Prerequisites: Take RCP 110, RCP 113, and RCP 114 with a minimum grade of C

Corequisites: Take RCP 111

**RCP 152. RCP Clinical Practice III. 2.0 Credits.** Class-0.0. Clinical-6.0. Lab-0.0. Work-0.0

This course provides entry-level clinical experience. Emphasis is placed on therapeutic and diagnostic patient care. Upon completion, students should be able to demonstrate clinical competence in required performance evaluations.

Prerequisites: Take RCP 111, RCP 115, and RCP 145 with a minimum grade of C

**RCP 210. Critical Care Concepts. 4.0 Credits.** Class-3.0. Clinical-0.0. Lab-3.0. Work-0.0

This course provides further refinement of acute patient care and underlying pathophysiology. Topics include a continuation in the application and management of mechanical ventilation, assessment underlying pathophysiology, and introduction of critical care monitoring. Upon completion, students should be able to demonstrate competence in respiratory therapy concepts and procedures through written, laboratory and/or clinical simulation evaluations.

Prerequisites: Take RCP 111, RCP 115, RCP 145, RCP 152, and MED 120 with a minimum grade of C

Take MAT 143, MAT 152, or MAT 171

Corequisites: Take RCP 222, RCP 235, and RCP 214



**RCP 211. Adv Monitoring/Procedures. 4.0 Credits.** Class-3.0. Clinical-0.0. Lab-3.0. Work-0.0

This course includes advanced information gathering and decision making for the respiratory care professional using evidence-based respiratory care protocols. Topics include advanced cardiac monitoring, special procedures, respiratory care protocols, and disease management. Upon completion, students should be able to assess, recommend, and independently modify respiratory care protocols through written, laboratory and/or clinical simulation evaluations.

Prerequisites: Take RCP 210, RCP 214, RCP 235, and RCP 222 with a minimum grade of C

Corequisites: Take RCP 247

**RCP 214. Neonatal and Pediatric Respiratory Care. 2.0 Credits.**

Class-1.0. Clinical-0.0. Lab-3.0. Work-0.0

This course provides comprehensive coverage of the concepts of neonatal and pediatric respiratory care. Emphasis is placed on pathophysiology, patient assessment and special therapeutic needs of neonates and children based on evidence-based medicine protocols and clinical practice guidelines. Upon completion, students should be able to demonstrate competence in the neonatal and pediatric respiratory care concepts through written, laboratory and/or clinical simulation evaluations.

Prerequisites: Take RCP 111, RCP 115, RCP 145, and RCP 152 with a minimum grade of C

**RCP 222. Special Practice Lab. 1.0 Credit.** Class-0.0. Clinical-0.0.

Lab-2.0. Work-0.0

This course provides additional laboratory learning opportunities in respiratory care. Emphasis is placed on therapeutic procedures and equipment management. Upon completion, students should be able to demonstrate competence in concepts and procedures through laboratory evaluations.

Prerequisites: Take RCP 111, RCP 115, RCP 145, and RCP 152 with a minimum grade of C

**RCP 223. Special Practice Lab. 1.0 Credit.** Class-0.0. Clinical-0.0.

Lab-3.0. Work-0.0

This course provides additional laboratory learning opportunities in respiratory care. Emphasis is placed on therapeutic procedures and equipment management. Upon completion, students should be able to demonstrate competence in concepts and procedures through laboratory evaluations.

**RCP 235. RCP Clinical Practice IV. 5.0 Credits.** Class-0.0. Clinical-15.0.

Lab-0.0. Work-0.0

This course provides advanced practitioner clinical experience. Emphasis is placed on therapeutic and diagnostic patient care. Upon completion, students should be able to demonstrate clinical competence in required performance evaluations.

Prerequisites: Take RCP 111, RCP 115, RCP 145, and RCP 152 with a minimum grade of C

Corequisites: Take RCP 210

**RCP 247. RCP Clinical Practice V. 7.0 Credits.** Class-0.0. Clinical-21.0.

Lab-0.0. Work-0.0

This course provides advanced practitioner clinical experience. Emphasis is placed on therapeutic and diagnostic patient care. Upon completion, students should be able to demonstrate clinical competence in required performance evaluations.

Prerequisites: Take RCP 210, RCP 211, RCP 214, RCP 222, and RCP 235 with a minimum grade of C

Corequisites: Take RCP 211

## Simulation & Game Development (SGD)

**SGD 111. Introduction to Simulation and Game Development. 3.0**

**Credits.** Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0

This course provides students with an introduction to simulation and game development. Topics include setting, storytelling, narrative, character design, interface design, game play, internal economy, core mechanics, game genres, AI, the psychology of game design and professionalism. Upon completion, students should be able to demonstrate knowledge of the major aspects of simulation and game design and development.

**SGD 112. Simulation and Game Development Design. 3.0 Credits.**

Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0

This course introduces the fundamentals of simulation and game design. Topics include industry standards and design elements for simulation and games. Upon completion, students should be able to design simple simulations and/or games.

**SGD 113. Simulation and Game Development Programming. 3.0**

**Credits.** Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0

This course introduces the fundamentals of programming languages and tools employed in simulation and game development. Emphasis is placed on programming concepts used to create simulations and games. Upon completion, students should be able to program simple games and/or simulations.

**SGD 114. 3D Modeling. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-3.0.

Work-0.0

This course introduces the tools required to create three-dimensional (3D) models. Emphasis is placed on exploring tools used to create 3D models. Upon completion, students should be able to create and animate 3D models using 3D modeling tools.

**SGD 115. Physically-Based Modeling. 3.0 Credits.** Class-2.0.

Clinical-0.0. Lab-2.0. Work-0.0

This course introduces fundamental physical concepts as applied to the simulation and game design fields. Topics include hands-on programming of vectors, matrices, graphical analyses, forces, laws of motion, work, energy, momentum, properties of matter, and problem-solving methods. Upon completion, students should be able to demonstrate an understanding of the principles studied as applied to the simulation and game design fields.

Prerequisites: Take One: MAT 121 or MAT 171

**SGD 116. Graphic Design Tools. 3.0 Credits.** Class-2.0. Clinical-0.0.

Lab-2.0. Work-0.0

This course introduces students to computer-based graphic design tools and their use within the context of simulation and game design. Topics include texture creation, map creation, and introduction to advanced level graphic design techniques. Upon completion, students should be able to competently use and explain industry-standard graphic design software.

**SGD 117. Art for Games. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-3.0.

Work-0.0

This course introduces students to the basic principles of art and how they apply to simulations and games. Emphasis is placed on learning to develop industry quality concept art for characters and other assets, as well as techniques needed to create such art. Upon completion, students should be able to create their own industry standard concept art for use in SGD projects.

**SGD 122. Simulation and Game Database Programming. 3.0 Credits.**  
Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0

This course covers the creation and application of databases for simulation and game development. Emphasis is placed on various database and software development kits. Upon completion, students should be able to apply their knowledge of databases to the creation of simulations and games.

**SGD 123. Windows and Console Programming. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0

This course introduces the concepts of Windows and Console Programming. Emphasis is placed on learning MS Windows, the operating systems of various consoles and programming techniques. Upon completion, students should be able to demonstrate an understanding of Windows and of various consoles' operating systems.

Prerequisites: Take SGD 113

**SGD 124. Massive Multiplayer Online Programming. 3.0 Credits.**

Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0

This course introduces the concepts of Massive On-line Programming for simulations and games. Emphasis is on learning Massive Multiplayer On-line simulation and game programming techniques. Upon completion, students should be able to create Massive Multiplayer On-line simulation or game.

**SGD 125. Simulation and Game Artificial Intelligence. 3.0 Credits.**

Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0

This course introduces the artificial intelligence concepts related to simulation and game development. Emphasis is placed on expert systems. Upon completion, students should be able to describe the basic concepts and procedures related to the development of artificial intelligence systems used in simulation and games.

**SGD 126. Simulation and Game Engine Design. 3.0 Credits.** Class-2.0.

Clinical-0.0. Lab-3.0. Work-0.0

This course introduces the techniques needed to design and create a simulation/game engine. Emphasis is placed on learning core techniques used to design and create simulation and/or game engines. Upon completion, students should be able to design and create a simulation or game engine.

**SGD 134. SG Quality Assurance. 3.0 Credits.** Class-2.0. Clinical-0.0.

Lab-2.0. Work-0.0

This course provides an introduction to software quality assurance as it relates to simulation and game development. Emphasis is placed on designing testing tools, bug databases, and on learning methodologies required for systematic, detail-oriented testing procedures for the simulation and game industry. Upon completion, students should be able to demonstrate the proper skills to obtain a job as a quality assurance tester in the simulation/game industry.

**SGD 135. Serious Games. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0.

Work-0.0

This course provides students with an overview of serious games and their applications in immersive learning and education. Emphasis is placed on developing games for education, corporate training, and medical/military simulations. Upon completion, students should be able to design their own serious games.

**SGD 158. SGD Business Management. 3.0 Credits.** Class-3.0.

Clinical-0.0. Lab-0.0. Work-0.0

This course introduces the business side of the interactive game industry. Emphasis will be placed on licenses, serious games, psychological profiling, publisher/developer relations, and contract negotiation skills. Upon completion, students should be able to understand how a game evolves from concept to the customer.

**SGD 159. SGD Production Management. 3.0 Credits.** Class-3.0.

Clinical-0.0. Lab-0.0. Work-0.0

This course introduces the techniques and methods used in interactive game production and how to manage a project. Emphasis is placed on scheduling, production plans, marketing and budgeting. Upon completion, students should be able to manage a team, track production, and understand the process of project management.

**SGD 161. Simulation and Game Animation. 3.0 Credits.** Class-2.0.

Clinical-0.0. Lab-3.0. Work-0.0

This course introduces the fundamental principles of animation used in simulation and game development. Emphasis is placed on historical survey of animation, aspects of the animation process and animation techniques. Upon completion, students should be able to produce character sketches, morph simple objects, create walk and run cycles and develop professional storyboards.

**SGD 162. Simulation and Game 3-D Animation. 3.0 Credits.** Class-2.0.

Clinical-0.0. Lab-3.0. Work-0.0

This course introduces the fundamental principles of 3D animation used in simulation and game development. Emphasis is placed on a historical survey of 3D animation, aspects of the 3D animation techniques. Upon completion, students should be able to produce 3D character sketches, morph simple objects, create walk and run cycles and develop professional storyboards.

**SGD 163. Simulation and Game Documentation. 3.0 Credits.**

Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0

This course introduces the techniques and methods used to create simulation and game production and design documents. Emphasis is placed on the design document to include scheduling, production plans, marketing and budgeting. Upon completion, students should be able to create design and produce documents for any simulation or game.

**SGD 164. Simulation and Game Audio and Video. 3.0 Credits.**

Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0

This course introduces various aspects of audio and video and their application in simulations and games. Topics include techniques for producing and editing audio and video for multiple digital mediums. Upon completion, students should be able to produce and edit audio and video for simulations and games.

**SGD 165. Simulation and Game Character Development. 3.0 Credits.**

Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0

This course introduces the concepts needed to create fictional personality for use in digital videos, animations, simulations and games. Topics include aspects of character, developing backgrounds, mannerisms and voice. Upon completion, students should be able to develop characters and backgrounds for simulations and games.

**SGD 167. Simulation and Game Ethics. 3.0 Credits.** Class-3.0.

Clinical-0.0. Lab-0.0. Work-0.0

This course introduces principles of philosophy and ethics as they relate to simulation and game development. Topics include moral philosophy and ethics. Upon completion, students should be able to discuss philosophical and ethical issues related to simulation and game development.

**SGD 168. Mobile Simulation and Game Programming I. 3.0 Credits.**

Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0

This course introduces the mobile simulation and game programming process. Topics include mobile simulation/game programming, performance tuning, animation, sound effects, music, and mobile networks. Upon completion, students should be able to apply simulation/game programming concepts to the creation of mobile simulations and games.

**SGD 170. Handheld Simulation and Game Programming. 3.0 Credits.**  
Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0

This course introduces the concepts of hand-held simulation and game development. Emphasis is placed on hand-held game API, including stylus input, system buttons, infrared communications audio/visual creation and the physics of hand-held game API. Upon completion, students should be able to create a simple simulation or game for a hand-held device.

**SGD 171. Flash Simulation and Game Programming. 3.0 Credits.**  
Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0

This course introduces the Flash programming environment for use in simulation and game development. Topics include timeline effects, extensibility layers, alias text, globalization tools, ActionScript and lingo programming. Upon completion, students should be able to create a simple simulation or game using Flash.

**SGD 172. Virtual Simulation and Game Environments. 3.0 Credits.**  
Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0

This course covers the use of virtual reality tools and techniques in simulation and game development. Emphasis is placed on acquiring the skills necessary to create scalable virtual characters and environments for use in simulations and games. Upon completion, students should be able to create a simple game or simulation in a virtual environment.

**SGD 173. Lighting and Shading Algorithms. 3.0 Credits.** Class-2.0.  
Clinical-0.0. Lab-3.0. Work-0.0

This course introduces the concepts of various lighting and shading algorithms for use in simulation and game development. Topics include various tools used to create light and shadows. Upon completion, students should be able to apply knowledge of various lighting and shading algorithms to the creation of simulation and games.

Prerequisites: Take SGD 214

**SGD 174. Simulation and Game Level Design. 3.0 Credits.** Class-2.0.  
Clinical-0.0. Lab-3.0. Work-0.0

This course introduces the tools used to create levels for real-time simulation and games. Topics include level design, architecture theory, modeling for 3D engines and texturing methods. Upon completion, students should be able to design simple levels using industry standard tools.

**SGD 181. Machinima. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-3.0.  
Work-0.0

This course covers machinima techniques in the simulation and game industry. Emphasis is placed on developing movies and animations within industry-standard game engines for simulations and games. Upon completion, students should be able to demonstrate a basic understanding of in-game cinematic creation.

**SGD 193S. Selected Topics in Graphic Novel Games. 3.0 Credits.**  
Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0

This course provides covers the art of Graphic Novels and how they can be used in creating and developing more fun and engaging Simulation and Video Games. Topics include the genres, history, tools, required skills and technologies in the subject area. Upon completion, students should have a general understanding of the genres, tools, required skills, and technologies to create Graphic Novels.

**SGD 210. 3D Data Capture. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-3.0.  
Work-0.0

This course introduces students to the tools used to capture data in a 3D environment. Emphasis is placed on capturing data from motion capture and/or 3D scanning devices for use in 3D models and animations. Upon completion, students should be able to capture data from a 3D environment and import for use in 3D models, simulations, and animations.

Prerequisites: Take SGD 114

**SGD 212. Simulation and Game Development Design II. 3.0 Credits.**  
Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0

This course covers the advanced principles of simulation and game design. Topics include advanced design concepts in simulation and game development. Upon completion, students should be able to design an advanced simulation or game.

Prerequisites: Take SGD 112

**SGD 213. Simulation Game Development Programming II. 3.0 Credits.**  
Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0

This course covers advanced programming concepts used to create simulations and games. Emphasis is placed on acquiring advanced programming skills for use in creating simulations and games. Upon completion, students should be able to program an advanced simulation or game.

Prerequisites: Take One: SGD 113, CSC 134, CSC 151 or CSC 153

**SGD 214. 3D Modeling II. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-3.0.  
Work-0.0

This course introduces the tools used to create and animate advanced 3 dimensional models. Emphasis is placed on identifying and utilizing the tools required to create and animate advanced 3D models. Upon completion, students should be able to create and animate advanced 3D models using 3D modeling tools.

Prerequisites: Take SGD 114

**SGD 232. Survey of Game Engines. 3.0 Credits.** Class-3.0. Clinical-0.0.  
Lab-0.0. Work-0.0

This course provides students with an overview of various types of game engines. Emphasis is placed on learning industry-standard game engines. Upon completion, students should be able to demonstrate a basic understanding of the different types of game engines.

**SGD 237. Rigging 3D Models. 3.0 Credits.** Class-2.0. Clinical-0.0.  
Lab-3.0. Work-0.0

This course covers the fundamentals of rigging 3D models for animation. Emphasis is placed on learning how to properly weight a model, rig it with a skeleton, and create fluid movement. Upon completion, students should be able to demonstrate the ability to properly rig 3D models.

Prerequisites: Take SGD 114

Corequisites: Take SGD 162

**SGD 244. 3D Modeling III. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-3.0.  
Work-0.0

This course is designed to further a student's knowledge in creating visually compelling 3D models through the use of industry-standard software. Emphasis is placed on learning how to develop accurate textures and normal maps. Upon completion, students should be able to develop industry caliber 3D models.

Prerequisites: Take SGD 214

**SGD 268. Mobile Simulation and Game Programming II. 3.0 Credits.**

Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0

This course introduces advanced mobile simulation and game programming processes. Topics include advanced mobile simulation/game platforms, performance tuning, animation, sound effects, music, and mobile networks. Upon completion, students should be able to apply advanced simulation/game programming concepts to the creation of mobile simulations and games.

Prerequisites: Take SGD 168

**SGD 271. Advanced Flash Programming. 3.0 Credits.**

Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0

This course is designed to expand students' previous knowledge of the Flash programming environment. Emphasis is placed on learning advanced Flash techniques for use in the simulation and game industry. Upon completion, students should be able to create industry-quality simulations or games using Flash.

Prerequisites: Take SGD 171

**SGD 274. Simulation and Game Level Design II. 3.0 Credits.**

Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0

This course introduces the advanced tools used to create levels for real-time simulations and games. Topics include advanced level guide and architecture theory, concepts related to "critical path" and "flow," game balancing, playtesting and storytelling. Upon completion, students should be able to design complex levels using industry standard tools.

Prerequisites: Take SGD 174

**SGD 285. Simulation and Game Software Engineering. 3.0 Credits.**

Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0

This course introduces object oriented software engineering concepts related to simulation and game development. Topics include systematic approaches to the development, operation and maintenance of simulations and games. Upon completion, students should be able to apply software engineering techniques to the development of simulations and games.

Prerequisites: Take One: SGD 212, SGD 213, or SGD 214

**SGD 288. Simulation and Game Development Portfolio Design. 2.0****Credits.** Class-1.0. Clinical-0.0. Lab-2.0. Work-0.0

This course covers the organization and presentation of a simulation and game design portfolio and appropriate related materials. Emphasis is placed on development and evaluation of the portfolio, design and production of a resume and self-promotional materials, and interview techniques. Upon completion, students should be able to prepare and professionally present an effective portfolio and related self-promotional materials.

Corequisites: Take SGD 289

**SGD 289. Simulation and Game Development Project. 3.0 Credits.**

Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0

This course provides students with the opportunity to create a functional simulation or game with minimal instructor support. Emphasis is placed upon verbal and written communication, skill documentation, professional presentation and user training. Upon completion, students should be able to create and professionally present a fully functional simulation or game.

Prerequisites: Take One: SGD 212, SGD 213, SGD 214, or SGD 285

## Sociology (SOC)

**SOC 210. Introduction to Sociology. 3.0 Credits.**

Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course introduces the scientific study of human society, culture, and social interactions. Topics include socialization, research methods, diversity and inequality, cooperation and conflict, social change, social institutions, and organizations. Upon completion, students should be able to demonstrate knowledge of sociological concepts as they apply to the interplay among individuals, groups, and societies.

Prerequisites: Complete one of the following options:

- Take DRE 098
- Set 2: Take EFL 111 EFL 112 with a minimum grade of C
- Set 3: Take ENG 111 with a minimum grade of C

**SOC 213. Sociology of the Family. 3.0 Credits.**

Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course covers the institution of the family and other intimate relationships. Emphasis is placed on mate selection, gender roles, sexuality, communication, power and conflict, parenthood, diverse lifestyles, divorce and remarriage, and economic issues. Upon completion, students should be able to analyze the family as a social institution and the social forces which influence its development and change. This is a writing intensive course.

Prerequisites: Complete one of the following options: Take DRE 098

Take EFL 111 EFL 112 with a minimum grade of C

Take ENG 111 with a minimum grade of C

**SOC 220. Social Problems. 3.0 Credits.**

Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course provides an in-depth study of current social problems. Emphasis is placed on causes, consequences, and possible solutions to problems associated with families, schools, workplaces, communities, and the environment. Upon completion, students should be able to recognize, define, analyze, and propose solutions to these problems.

Prerequisites: Complete one of the following options:

- Take DRE 098
- Take ENG 111 ENG 112 ENG 113 or ENG 114 Minimum
- grade C

**SOC 225. Social Diversity. 3.0 Credits.**

Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course provides a comparison of diverse roles, interests, opportunities, contributions, and experiences in social life. Topics include race, ethnicity, gender, sexual orientation, class, and religion. Upon completion, students should be able to analyze how cultural and ethnic differences evolve and how they affect personality development, values, and tolerance.

Prerequisites: Complete one of the following options: Take DRE 098

Take EFL 111 EFL 112 with a minimum grade of C

Take ENG 111 with a minimum grade of C



**SOC 234. Sociology of Gender. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course examines contemporary roles in society with special emphasis on recent changes. Topics include sex role socialization, myths and stereotypes, gender issues related to family, work, and power. Upon completion, students should be able to analyze modern relationships between men and women.

Prerequisites: Complete one of the following options:

- Take DRE 098
- Take ENG 111 ENG 112 ENG 113 or ENG 114 Minimum
- grade C

## Spanish (SPA)

**SPA 111. Elementary Spanish I. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course introduces the fundamental elements of the Spanish language within a cultural context. Emphasis is placed on the development of basic listening, speaking, reading, and writing skills. Upon completion, students should be able to comprehend and respond with grammatical accuracy to spoken and written Spanish and demonstrate cultural awareness.

Prerequisites: Complete one of the following options: Take DRE 098 or ENG 111

Take EFL 111 and EFL 112 with a minimum grade of C

Corequisites: Take SPA 181

**SPA 112. Elementary Spanish II. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course is a continuation of SPA 111 focusing on the fundamental elements of the Spanish language within a cultural context. Emphasis is placed on the progressive development of listening, speaking, reading, and writing skills. Upon completion, students should be able to comprehend and respond with increasing proficiency to spoken and written Spanish and demonstrate further cultural awareness.

Prerequisites: Take SPA 111 SPA 181 Minimum grade C

Corequisites: Take SPA 182

**SPA 120. Spanish for the Workplace. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course offers applied Spanish for the workplace to facilitate basic communication with people whose native language is Spanish. Emphasis is placed on oral communication and career-specific vocabulary that targets health, business, and/or public service professions. Upon completion, students should be able to communicate at a functional level with native speakers and demonstrate cultural sensitivity.

**SPA 161. Cultural Immersion. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0

This course explores Hispanic culture through intensive study on campus and field experience in a host country or comparable area within the United States. Topics include an overview of linguistic, historical, geographical, sociopolitical, economic, and/or artistic concerns of the area visited. Upon completion, students should be able to exhibit first-hand knowledge of issues pertinent to the host area and demonstrate understanding of cultural differences. This course has been approved to satisfy the comprehensive articulation agreement for transferability as a pre-major and/or elective course requirement.

Prerequisites: Take SPA 111 Minimum grade C

**SPA 181. Spanish Lab 1. 1.0 Credit.** Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0

This course provides an opportunity to enhance acquisition of the fundamental elements of the Spanish language. Emphasis is placed on the progressive development of basic listening, speaking, reading, and writing skills through the use of various supplementary learning media and materials. Upon completion, students should be able to comprehend and respond with grammatical accuracy to spoken and written Spanish and demonstrate cultural awareness.

**SPA 182. Spanish Lab 2. 1.0 Credit.** Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0

This course provides an opportunity to enhance acquisition of the fundamental elements of the Spanish language. Emphasis is placed on the progressive development of basic listening, speaking, reading, and writing skills through the use of various supplementary learning media and materials. Upon completion, students should be able to comprehend and respond with increasing proficiency to spoken and written Spanish and demonstrate cultural awareness.

Prerequisites: Take SPA 111 Minimum grade C

**SPA 211. Intermediate Spanish I. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course provides a review and expansion of the essential skills of the Spanish language. Emphasis is placed on the study of authentic and representative literary and cultural texts. Upon completion, students should be able to communicate effectively, accurately, and creatively about the past, present, and future.

Prerequisites: Take SPA 112 SPA 182 Minimum grade C

Corequisites: Take SPA 281

**SPA 212. Intermediate Spanish II. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course provides a continuation of SPA 211. Emphasis is placed on the continuing study of authentic and representative literary and cultural texts. Upon completion, students should be able to communicate spontaneously and accurately with increasing complexity and sophistication.

Prerequisites: Take SPA 211 SPA 281 Minimum grade C

Corequisites: Take SPA 282

**SPA 221. Spanish Conversation. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course provides an opportunity for intensive communication in spoken Spanish. Emphasis is placed on vocabulary acquisition and interactive communication through the discussion of media materials and authentic texts. Upon completion, students should be able to discuss selected topics, express ideas and opinions clearly, and engage in formal and informal conversations.

Prerequisites: Take SPA 212 Minimum grade C

**SPA 281. Spanish Lab 3. 1.0 Credit.** Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0

This course provides an opportunity to enhance the review and expansion of the essential skills of the Spanish language. Emphasis is placed on the study of authentic and representative literary and cultural texts through the use of various supplementary learning media and materials. Upon completion, students should be able to communicate effectively, accurately, and creatively about the past, present, and future.

Prerequisites: Take SPA 112 SPA 182 Minimum grade C

Corequisites: Take SPA 211

**SPA 282. Spanish Lab 4. 1.0 Credit.** Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0

This course provides an opportunity to enhance the review and expansion of the essential skills of the Spanish language. Emphasis is placed on the continuing study of authentic and representative literary and cultural texts through the use of various supplementary learning media and materials. Upon completion, students should be able to communicate spontaneously and accurately with increasing complexity and sophistication.

Prerequisites: Take SPA 281

Corequisites: Take SPA 212

## Substance Abuse (SAB)

**SAB 110. Substance Abuse Overview. 3.0 Credits.** Class-3.0.

Clinical-0.0. Lab-0.0. Work-0.0

This course provides an overview of the core concepts in substance abuse and dependence. Topics include the history of drug use/abuse, effects on societal members, treatment of addiction, and preventive measures. Upon completion, students should be able to demonstrate knowledge of the etiology of drug abuse, addiction, prevention, and treatment.

**SAB 120. Intake and Assessment. 3.0 Credits.** Class-3.0. Clinical-0.0.

Lab-0.0. Work-0.0

This course develops processes for establishment of client rapport, elicitation of client information on which therapeutic activities are based, and stimulation of client introspection. Topics include diagnostic criteria, functions of counseling, nonverbal behavior, collaterals and significant others, dual diagnosis, client strengths and weakness, uncooperative clients, and crisis interventions. Upon completion, students should be able to establish communication with clients, recognize disorders, obtain information for counseling, and terminate the counseling process. This course is a unique concentration requirement of the Substance Abuse concentration in the Human Services Technology program.

**SAB 125. SA Case Management. 3.0 Credits.** Class-2.0. Clinical-0.0.

Lab-2.0. Work-0.0

This course provides case management activities, including record keeping, recovery issues, community resources, and continuum of care. Emphasis is placed on establishing a systematic approach to monitor the treatment plan and maintain quality of life. Upon completion, students should be able to assist clients in the continuum of care as an ongoing recovery process and develop agency networking.

**SAB 135. Addictive Process. 3.0 Credits.** Class-3.0. Clinical-0.0.

Lab-0.0. Work-0.0

This course explores the physical, emotional, psychological, and cultural aspects of the addictive process. Emphasis is placed on addictions to food, sex, alcohol, drugs, work, gambling, and relationships. Upon completion, students should be able to identify the effects, prevention strategies, and treatment methods associated with addictive disorders.

**SAB 140. Pharmacology. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0.

Work-0.0

This course covers the pharmacology of psychoactive drugs and abused chemicals and treatment options. Emphasis is placed on the use of psychoactive drugs and related psychological and social complexities, including models for prevention and treatment. Upon completion, students should be able to understand and identify theories of addiction, major classes of drugs, treatment alternatives, and social repercussions.

**SAB 210. Sub Abuse Counseling. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0

This course provides theory and skills acquisition by utilizing intervention strategies designed to obtain therapeutic information, support recovery, and prevent relapse. Topics include counseling individuals and dysfunctional families, screening instruments, counseling techniques and approaches, recovery and relapse, and special populations. Upon completion, students should be able to discuss issues critical to recovery, identify intervention models, and initiate a procedure culminating in cognitive/behavioral change.

Prerequisites: Take each set: Set 1: HSE 125 with a with a minimum grade of C

- SAB 110

**SAB 220. Group Techniques/Therapy. 3.0 Credits.** Class-2.0.

Clinical-0.0. Lab-2.0. Work-0.0

This course provides a practical guide to diverse methods of group therapy models used in the specific treatment of substance abuse and addiction. Emphasis is placed on the theory and practice of group therapy models specifically designed to treat the cognitive distortions of addiction and substance abuse. Upon completion, students should be able to skillfully practice the group dynamics and techniques formulated for substance abuse and addiction.

Prerequisites: Take each set: Set 1: HSE 112 with a with a minimum grade of C

- SAB 110

**SAB 230. Family Therapy. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-2.0.

Work-0.0

This course covers the theories and models of family systems therapy as designed for families affected by substance abuse and addiction. Emphasis is placed on structures and procedures necessary for successful family therapy, including the needs, types of resistance, and individual family dynamics. Upon completion, students should be able to understand and identify dynamics and patterns unique to families affected by substance abuse and the appropriate model of treatment.

Prerequisites: Take SAB 110

**SAB 240. Sab Issues in Client Serv. 3.0 Credits.** Class-3.0. Clinical-0.0.

Lab-0.0. Work-0.0

This course introduces systems of professional standards, values, and issues in substance abuse counseling. Topics include confidentiality, assessment of personal values, professional responsibilities, competencies, and ethics relative to multicultural counseling and research. Upon completion, students should be able to understand and discuss multiple ethical issues applicable to counseling and apply various decision-making models to current issues. This course is a unique concentration requirement of the Substance Abuse concentration in the Human Services Technology program.

Prerequisites: Take SAB 110

**SAB 250. Prevention and Education. 2.0 Credits.** Class-2.0.

Clinical-0.0. Lab-0.0. Work-0.0

This course uses various approaches to designing and implementing education programs concerning substance abuse, intervention, and relapse prevention for adolescents and adults. Emphasis is placed on the education of individuals and substance abusers/users and their families. Upon completion, students should be able to present a wide variety of education programs for individuals and substance abusers/users and their families.

Prerequisites: Take One: SAB 110 or SAB 140

**SAB 255. Environmental Prevention. 3.0 Credits.** Class-3.0.  
Clinical-0.0. Lab-0.0. Work-0.0

This course introduces accepted environmental and social approaches in the field of substance abuse prevention. Emphasis is placed on specific environmental prevention strategies focused on changing conditions that contribute to the use of alcohol and other drugs. Upon completion, students should be able to demonstrate understanding of how media, social change and community obligation can help prevent substance use.

## Surgery (SUR)

**SUR 110. Intro to Surgical Technology. 3.0 Credits.** Class-3.0.  
Clinical-0.0. Lab-0.0. Work-0.0

This course provides a comprehensive study of peri-operative care, patient care concepts, and professional practice concepts within the profession of surgical technology. Topics include: introductory concepts, organizational structure and relationships, legal, ethical and moral issues, medical terminology, pharmacology, anesthesia, wound healing management concepts, and the technological sciences. Upon completion, students should be able to apply theoretical knowledge of the course topics to the practice of surgical technology.

Corequisites: Take SUR 111

**SUR 111. Periop Patient Care. 7.0 Credits.** Class-5.0. Clinical-0.0.  
Lab-6.0. Work-0.0

This course provides the surgical technology student the theoretical knowledge required to function in the pre-operative, intra-operative, and post-operative role. Topics include asepsis, disinfection and sterilization, physical environment, instrumentation, equipment, peri-operative patient care, and peri-operative case management. Upon completion, students should be able to apply the principles and practice of the peri-operative team member to the operative environment.

Corequisites: Take SUR 110

**SUR 122AB. Surgical Procedures I. 3.0 Credits.** Class-2.5. Clinical-0.0.  
Lab-1.5. Work-0.0

This course provides an introduction to selected basic and intermediate surgical specialties that students are exposed to the first clinical rotation. Emphasis is placed on related surgical anatomy, pathology, and procedures that enhance theoretical knowledge of patient care, instrumentation, supplies, and equipment. Upon completion, students should be able to correlate, integrate, and apply theoretical knowledge of the course topics to the clinical operative environment.

Prerequisites: Take All: SUR 110 and SUR 111

Corequisites: Take SUR 123

**SUR 122BB. Surgical Procedures I. 3.0 Credits.** Class-2.5. Clinical-0.0.  
Lab-1.5. Work-0.0

This course provides an introduction to selected basic and intermediate surgical specialties that students are exposed to the first clinical rotation. Emphasis is placed on related surgical anatomy, pathology, and procedures that enhance theoretical knowledge of patient care, instrumentation, supplies, and equipment. Upon completion, students should be able to correlate, integrate, and apply theoretical knowledge of the course topics to the clinical operative environment.

Prerequisites: Take All: SUR 110 and SUR 111

Corequisites: Take SUR 122AB

**SUR 122. Surgical Procedures I. 6.0 Credits.** Class-5.0. Clinical-0.0.  
Lab-3.0. Work-0.0

This course provides an introduction to selected basic and intermediate surgical specialties that students are exposed to the first clinical rotation. Emphasis is placed on related surgical anatomy, pathology, and procedures that enhance theoretical knowledge of patient care, instrumentation, supplies, and equipment. Upon completion, students should be able to correlate, integrate, and apply theoretical knowledge of the course topics to the clinical operative environment.

Prerequisites: Take All: SUR 110 and SUR 111

Corequisites: Take SUR 123

**SUR 123AB. Sur Clinical Practice I. 3.5 Credits.** Class-0.0. Clinical-10.5.  
Lab-0.0. Work-0.0

This course provides clinical experience with a variety of perioperative assignments to build upon skills learned in SUR 111. Emphasis is placed on the scrub and circulating roles of the surgical technologist including aseptic technique and basic case preparation for selected surgical procedures. Upon completion, students should be able to prepare, assist with, and dismantle basic surgical cases in both the scrub and circulating roles.

Prerequisites: Take All: SUR 110 and SUR 111

Corequisites: Take SUR 122

**SUR 123BB. Sur Clinical Practice I. 3.5 Credits.** Class-0.0. Clinical-10.5.  
Lab-0.0. Work-0.0

This course provides clinical experience with a variety of perioperative assignments to build upon skills learned in SUR 111. Emphasis is placed on the scrub and circulating roles of the surgical technologist including aseptic technique and basic case preparation for selected surgical procedures. Upon completion, students should be able to prepare, assist with, and dismantle basic surgical cases in both the scrub and circulating roles.

Prerequisites: Take All: SUR 110 and SUR 111

Corequisites: Take SUR 123AB

**SUR 123. Sur Clinical Practice I. 7.0 Credits.** Class-0.0. Clinical-21.0.  
Lab-0.0. Work-0.0

This course provides clinical experience with a variety of perioperative assignments to build upon skills learned in SUR 111. Emphasis is placed on the scrub and circulating roles of the surgical technologist including aseptic technique and basic case preparation for selected surgical procedures. Upon completion, students should be able to prepare, assist with, and dismantle basic surgical cases in both the scrub and circulating roles.

Prerequisites: Take All: SUR 110 and SUR 111

Corequisites: Take SUR 122

**SUR 134. Surgical Procedures II. 5.0 Credits.** Class-5.0. Clinical-0.0.  
Lab-0.0. Work-0.0

This course provides a comprehensive study of intermediate and advanced surgical specialties that students are exposed to in the second clinical rotation. Emphasis is placed on related surgical anatomy, pathology, and procedures that enhance theoretical knowledge of patient care, instrumentation, supplies, and equipment. Upon completion, students should be able to correlate, integrate, and apply theoretical knowledge of the course topics to the clinical operative environment.

Prerequisites: Take SUR 123

**SUR 135. SUR Clinical Practice II. 4.0 Credits.** Class-0.0. Clinical-12.0. Lab-0.0. Work-0.0

This course provides clinical experience with a variety of perioperative assignments to build skills required for complex perioperative patient care. Emphasis is placed on greater technical skills, critical thinking, speed, efficiency, and autonomy in the operative setting. Upon completion, students should be able to function in the role of an entry-level surgical technologist.

Prerequisites: Take SUR 123

Corequisites: Take SUR 134

**SUR 137. Professional Success Preparation. 1.0 Credit.** Class-1.0. Clinical-0.0. Lab-0.0. Work-0.0

This course provides employability skills and an overview of theoretical knowledge in preparation for certification. Topics include test-taking strategies, resume preparation, interviewing strategies, communication skills, and teamwork concepts. Upon completion, students should be able to prepare a resume, demonstrate appropriate interview techniques, and identify strengths and weaknesses in preparation for certification.

**SUR 210. Advanced Sur Clinical Practice. 2.0 Credits.** Class-0.0. Clinical-6.0. Lab-0.0. Work-0.0

This course is designed to provide individualized experience in advanced practice, education, circulating, and managerial skills. Emphasis is placed on developing and demonstrating proficiency in skills necessary for advanced practice. Upon completion, students should be able to assume leadership roles in a chosen specialty area.

Prerequisites: Take SUR 135 with a minimum grade of C

**SUR 211. Advanced Theoretical Concepts. 2.0 Credits.** Class-2.0. Clinical-0.0. Lab-0.0. Work-0.0

This course covers theoretical knowledge required for extension of the surgical technologist role. Emphasis is placed on advanced practice in complex surgical specialties, educational methodologies, and managerial skills. Upon completion, students should be able to assume leadership roles in a chosen specialty area.

Prerequisites: Take SUR 134 with a minimum grade of C

**SUR 212. Surgical Clinical Supplement. 4.0 Credits.** Class-0.0. Clinical-12.0. Lab-0.0. Work-0.0

This course provides the opportunity to continue mastering the continuity of care in the peri-operative assignment. Emphasis is placed on maintaining and enhancing acquired clinical skills in the peri-operative setting. Upon completion, students should be able to demonstrate mastery of surgical techniques in the role of the entry level surgical technologist.

## Surveying (SRV)

**SRV 110. Surveying I. 4.0 Credits.** Class-2.0. Clinical-0.0. Lab-6.0. Work-0.0

This course introduces the theory and practice of plane surveying. Topics include the precise measurement of distances, angles, and elevations; bearing, azimuth and traverse computations; topography and mapping. Upon completion, students should be able to use/care for surveying equipment, collect field survey data, perform traverse computations and create a contour map.

Corequisites: Take 1 Set:

- MAT 121
- MAT 171
- DMA 060, DMA 070, and DMA 080
- DMA 065
- MAT 003
- BSP 4003

**SRV 111. Surveying II. 4.0 Credits.** Class-2.0. Clinical-0.0. Lab-6.0. Work-0.0

This course introduces route surveying and roadway planning and layout. Topics include simple, compound, reverse, spiral, and vertical curves; geometric design and layout; planning of cross-section and grade line; drainage; earthwork calculations; and mass diagrams. Upon completion, students should be able to calculate and lay out highway curves; prepare roadway plans, profiles, and sections; and perform slope staking.

Prerequisites: Take SRV 110

**SRV 210. Surveying III. 4.0 Credits.** Class-2.0. Clinical-0.0. Lab-6.0. Work-0.0

This course introduces boundary surveying, land partitioning, and calculations of areas. Topics include advanced traverses and adjustments, preparation of survey documents, and other related topics. Upon completion, students should be able to research, survey, and map a boundary.

Prerequisites: Take SRV 110

Corequisites: Take CEG 151

**SRV 220. Surveying Law. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0

This course introduces the law as related to the practice of surveying. Topics include surveyors' responsibilities, deed descriptions, title searches, eminent domain, easements, weight of evidence, riparian rights, and other related topics. Upon completion, students should be able to identify and apply the basic legal aspects associated with the practice of land surveying.

Prerequisites: Take SRV 110 SRV 210

**SRV 240. Topo/Site Surveying. 4.0 Credits.** Class-2.0. Clinical-0.0. Lab-6.0. Work-0.0

This course covers topographic, site, and construction surveying. Topics include topographic mapping, earthwork, site planning, construction staking, and other related topics. Upon completion, students should be able to prepare topographic maps and site plans and locate and stake out construction projects.

Prerequisites: Take SRV 110



**SRV 250. Advanced Surveying. 4.0 Credits.** Class-2.0. Clinical-0.0. Lab-6.0. Work-0.0

This course covers advanced topics in surveying. Topics include photogrammetry, astronomical observations, coordinate systems, error theory, GPS, GIS, Public Land System, and other related topics. Upon completion, students should be able to apply advanced techniques to the solution of complex surveying problems.

Prerequisites: Take SRV 111 SRV 210

**SRV 260. Field & Office Practices. 2.0 Credits.** Class-1.0. Clinical-0.0. Lab-3.0. Work-0.0

This course covers surveying project management, estimating, and responsibilities of surveying personnel. Topics include record-keeping, starting and operating a surveying business, contracts, regulations, taxes, personnel management, and professional ethics. Upon completion, students should be able to understand the requirements of operating a professional land surveying business.

## Sustainability Technologies (SST)

**SST 110. Introduction to Sustainability. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course introduces sustainability issues and individual contributions toward environmental sustainability. Topics include management processes needed to maximize renewable/non-renewable energy resources, economics of sustainability, and reduction of environmental impacts. Upon completion, students should be able to discuss sustainability practices and demonstrate an understanding of their effectiveness and impacts.

**SST 120. Energy Use Analysis. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0

This course introduces the principles of analyzing energy use, energy auditing tools and techniques, conservation techniques, and calculating energy savings. Topics include building system control theory, calibrating digital controls, energy loss calculations, and applicable conservation techniques. Upon completion, students should be able to demonstrate an understanding of energy use, audits, and controls in the analysis of energy consumption.

**SST 130. Modeling Renewable Energy. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0

This course introduces software and other technologies used for modeling renewable energy systems. Topics include renewable energy modeling software applications, data analysis, renewable energy sources, and cost of renewable energy systems. Upon completion, students should be able to use appropriate technology to model the effectiveness of renewable energy systems.

**SST 140. Green Building and Design Concepts. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course is designed to introduce the student to sustainable building design and construction principles and practices. Topics include sustainable building rating systems and certifications, energy efficiency, indoor environmental quality, sustainable building materials and water use. Upon completion, students should be able to identify the principles and practices of sustainable building design and construction.

**SST 210. Issues in Sustainability. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course introduces the long-term impacts and difficulties of applying sustainability concepts in an organization, business, or society. Topics include the application of sustainable technologies and the analysis of affordability, efficiencies, recycling, and small and large-scale design. Upon completion, students should be able to recognize the possible limitations of sustainable technologies and be prepared to reconcile such conflicts.

Prerequisites: Take SST 110

**SST 250. Sustainability Capstone Project. 3.0 Credits.** Class-1.0. Clinical-0.0. Lab-6.0. Work-0.0

This course introduces an integrated team approach to a sustainability topic of interest to students, faculty, or professional community. Topics include problem identification, proposal preparation, conceptual design, and an effective project work schedule. Upon completion, students should be able to integrate the many facets of a topic based on environmental sustainability into a completed project.

Prerequisites: Take SST 110

## Transportation Technology (TRN)

**TRN 110. Introduction to Transport Technology. 2.0 Credits.** Class-1.0. Clinical-0.0. Lab-2.0. Work-0.0

This course covers workplace safety, hazardous materials, environmental regulations, hand tools, service information, basic concepts, vehicle systems, and common transportation industry terminology. Topics include familiarization with major vehicle systems, proper use of various hand and power tools, material safety data sheets, and personal protective equipment. Upon completion, students should be able to demonstrate appropriate safety procedures, identify and use basic shop tools, and describe government regulations regarding transportation repair facilities.

**TRN 120. Basic Transportation Electricity. 5.0 Credits.** Class-4.0. Clinical-0.0. Lab-3.0. Work-0.0

This course covers basic electrical theory, wiring diagrams, test equipment, and diagnosis, repair and replacement of batteries, starters, and alternators. Topics include Ohm's Law, circuit construction, wiring diagrams, circuit testing, and basic troubleshooting. Upon completion, students should be able to properly use wiring diagrams, diagnose, test, and repair basic wiring, battery, starting, charging, and electrical concerns.

**TRN 120A. Basic Transportation Electrical Lab. 1.0 Credit.** Class-0.0. Clinical-0.0. Lab-3.0. Work-0.0

This course provides a lab that allows students to enhance their understanding of electrical components and circuits used in the transportation industry. Topics include inspection, diagnosis, and repair of electrical components and circuits using appropriate service information for specific transportation systems. Upon completion, students should be able to diagnose and service electrical components and circuits used in transportation systems.

**TRN 140. Transportation Climate Control. 2.0 Credits.** Class-1.0. Clinical-0.0. Lab-2.0. Work-0.0

This course covers the theory of refrigeration and heating, electrical/electronic/pneumatic controls, and diagnosis and repair of climate control systems. Topics include diagnosis and repair of climate control components and systems, recovery/recycling of refrigerants, and safety and environmental regulations. Upon completion, students should be able to diagnose and repair vehicle climate control systems.

**TRN 140A. Transportation Climate Control Lab. 2.0 Credits.** Class-1.0. Clinical-0.0. Lab-2.0. Work-0.0

This course provides experiences for enhancing student skills in the diagnosis and repair of transportation climate control systems. Emphasis is placed on reclaiming, recovery, recharging, leak detection, climate control components, diagnosis, air conditioning equipment, tools and safety. Upon completion, students should be able to describe the operation, diagnose, and safely service climate control systems using appropriate tools, equipment, and service information.

**TRN 145. Advanced Transportation Electronics. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0

This course covers advanced transportation electronic systems including programmable logic controllers, on-board data networks, telematics, high voltage systems, navigation, collision avoidance systems and electronic accessories. Topics include interpretation of wiring schematics, reprogramming PLC's, diagnosing and testing data networks and other electronic concerns. Upon completion, students should be able to reprogram PLC's, diagnose and test data networks and other electronic concerns, and work safely with high voltage systems.

Prerequisites: Take TRN 120

**TRN 170. Pc Skills for Transportation. 2.0 Credits.** Class-1.0. Clinical-0.0. Lab-2.0. Work-0.0

This course introduces students to personal computer literacy and Internet literacy with an emphasis on the transportation service industry. Topics include service information systems, management systems, computer-based systems, and PC-based diagnostic equipment. Upon completion, students should be able to access information pertaining to transportation technology and perform word processing.

**TRN 180. Basic Welding for Transportation. 3.0 Credits.** Class-1.0. Clinical-0.0. Lab-4.0. Work-0.0

This course covers the terms and procedures for welding various metals used in the transportation industry with an emphasis on personal safety and environmental health. Topics include safety and precautionary measures, setup/operation of MIG equipment, metal identification methods, types of welds/joints, techniques, inspection methods, cutting processes and other related issues. Upon completion, students should be able to demonstrate a basic knowledge of welding operations and safety procedures according to industry standard.

**TRN 180A. Basic Welding for Transportation Lab. 1.0 Credit.** Class-0.0. Clinical-0.0. Lab-3.0. Work-0.0

This course provides a laboratory experience for enhancing student skills in welding and cutting procedures associated with the transportation industry. Emphasis is placed on safety and precautionary measures, setup/operation of MIG equipment, metal identification, welds/joints, techniques, inspection of welds/joints, cutting processes and other related topics. Upon completion, students should be able to demonstrate a basic knowledge of welding operations and safety procedures according to industry standards.

## Turfgrass Management (TRF)

**TRF 110. Introduction Turfgrass Cultivation & Id And Identification. 4.0 Credits.** Class-3.0. Clinical-0.0. Lab-2.0. Work-0.0

This course covers the principles of reproduction, growth development, species characteristics, establishment and maintenance of golf courses and sports fields, and lawns. Topics include principles of reproduction, growth development, species characteristics, establishment and maintenance of golf courses and sports fields, and lawn applications. Upon completion, students should be able to identify turfgrass species and develop an establishment and maintenance plan for high quality turf areas in accordance with sustainable practices.

**TRF 120. Turfgrass Irrigation and Design. 4.0 Credits.** Class-2.0. Clinical-0.0. Lab-4.0. Work-0.0

This course covers the basic techniques involved in the design, layout, installation, and use of water-wise turfgrass irrigation systems. Topics include types of irrigation systems, components of the systems, materials available for use, and economic considerations. Upon completion, students should be able to complete a functional design for a turfgrass irrigation system according to sustainable practices.

**TRF 125. Turfgrass Computer App. 2.0 Credits.** Class-1.0. Clinical-0.0. Lab-3.0. Work-0.0

This course introduces basic computer applications for the turfgrass industry. Emphasis is placed on computer software applications for irrigation design, management, and budget planning for turfgrass applications. Upon completion, students should be able to use appropriate software for various turfgrass management applications.

**TRF 130. Native Flora ID. 2.0 Credits.** Class-1.0. Clinical-0.0. Lab-3.0. Work-0.0

This course covers identification of selected native ground covers and woodland trees by summer and/or winter characteristics. Emphasis is placed on mature age, fall colors, site adaptability, and habit of growth for special turf-related areas. Upon completion, students should be able to identify native plants by size and leaf, bud, twig, and limb formation.

**TRF 152. Landscape Maintenance. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0

This course introduces the tasks of landscape maintenance. Emphasis is placed on lawns, shrubs, trees, flowers, and ground covers. Upon completion, students should be able to maintain a landscape area on a year-round schedule.

**TRF 210. Turfgrass Eqmt Mgmt. 3.0 Credits.** Class-1.0. Clinical-0.0. Lab-4.0. Work-0.0

This course covers the operation and maintenance of specialized turfgrass management equipment. Topics include small engine use and repair; operation, maintenance, and repair of turfgrass management equipment; organization of shop areas; and safety considerations. Upon completion, students should be able to operate and maintain turfgrass management equipment.

**TRF 220. Turfgrass Calculations. 2.0 Credits.** Class-2.0. Clinical-0.0. Lab-0.0. Work-0.0

This course introduces the specific math concepts and calculations necessary in the turfgrass industry. Emphasis is placed on calibration of equipment used in the application of fertilizers and pesticides and calculation of solid materials used in construction. Upon completion, students should be able to correctly perform basic calculations and calibrations and estimate materials needed in specific professional turfgrass management situations.

**TRF 230. Turfgrass Mgmt Apps. 2.0 Credits.** Class-1.0. Clinical-0.0. Lab-2.0. Work-0.0

This course introduces specific sports field design, installation, and maintenance. Topics include natural grass croquet courts and baseball, soccer, and football fields. Upon completion, students should be able to perform specific tasks in layout, field marking, and preparing for tournament play.

**TRF 240. Turfgrass Pest Control. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0

This course covers detection and identification of turfgrass pests with emphasis on methods of sustainable management. Topics include pest identification with an understanding of pesticides used, application procedures, and costs involved in sustainable management programs. Upon completion, students should be able to identify turfgrass pests, select the proper pesticide, develop pest management programs, and/or use integrated pest management.

**TRF 250. Golf /Sport Field Const. 4.0 Credits.** Class-2.0. Clinical-0.0. Lab-4.0. Work-0.0

This course provides information for layout, materials, and construction of special recreational applications. Emphasis is placed on site selection, equipment, safety regulations, drainage, turfgrass species, and irrigation needs. Upon completion, students should be able to locate construction reference sites and develop drainage and irrigation plans from their own blueprints and topo map designs.

**TRF 260. Adv Turfgrass Mgmt. 4.0 Credits.** Class-3.0. Clinical-0.0. Lab-2.0. Work-0.0

This course covers the principles and practices involved in turfgrass management. Topics include choosing the best management practice in mowing, pest control, fertilization, irrigation, traffic control, air control, budgeting, and materials procurement. Upon completion, students should be able to demonstrate knowledge of the principles covered and select and apply the best practices in turfgrass management.

Prerequisites: Take TRF 110

**TRF 270. Advanced Turfgrass Equipment Management. 4.0 Credits.** Class-2.0. Clinical-0.0. Lab-4.0. Work-0.0

This course covers the advanced repair and maintenance of turfgrass equipment. Emphasis is placed on the diagnosis, repair and maintenance of power trains, electrical systems, hydraulics, small air-cooled engines, four-stroke engines, and compact diesel engines. Upon completion, students should be able to diagnose and repair commonly used turfgrass equipment and communicate information concerning the repairs and the necessary maintenance schedule in a professional manner.

Prerequisites: Take TRF 210

## Web Technologies (WEB)

**WEB 110. Internet/Web Fundamentals. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0

This course introduces World Wide Web Consortium (W3C) standard markup language and services of the Internet. Topics include creating web pages, search engines, FTP, and other related topics. Upon completion, students should be able to deploy a hand-coded website created with mark-up language, and effectively use and understand the function of search engines.

**WEB 115. Web Markup and Scripting. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0

This course introduces Worldwide Web Consortium (W3C) standard client-side Internet programming using industry-established practices. Topics include JavaScript, markup elements, stylesheets, validation, accessibility, standards, and browsers. Upon completion, students should be able to develop hand-coded web pages using current markup standards.

Prerequisites: Take WEB 110 Minimum grade C

**WEB 120. Introduction to Internet Multimedia. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0

This course introduces the creation of rich media for the Internet. Topics include the design, production and delivery of interactive content, rich media, digital video, and digital audio. Upon completion, students should be able to create multimedia projects incorporating graphics, text, video, and audio using industry standard authoring software or web standards.

**WEB 125. Mobile Web Design. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0

This course introduces students to web design for mobile devices. Topics include planning an effective mobile Web site, industry standard Mobile Markup Language, CSS3, multimedia, m-commerce, social media, testing and publishing. Upon completion, students should be able to plan, develop, test, and publish Web content designed for mobile devices.

Prerequisites: Take WEB 110 Minimum grade C

**WEB 140. Web Development Tools. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0

This course provides an introduction to web development software suites. Topics include the creation of web sites and applets using web development software. Upon completion, students should be able to create entire web sites and supporting applets.

**WEB 141. Mobile Interface Design. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0

This course covers current design standards and emerging approaches related to the design and development of user interfaces for mobile devices. Emphasis is placed on research and evaluation of standard and emerging practices for effective interface and user experience design. Upon completion, students should be able to design effective and usable interfaces for mobile devices.

**WEB 151. Mobile Application Development I. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0

This course introduces students to programming technologies, design and development related to mobile applications. Topics include accessing device capabilities, industry standards, operating systems, and programming for mobile applications using an OS Software Development Kit (SDK). Upon completion, students should be able to create basic applications for mobile devices.

**WEB 210. Web Design. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0

This course introduces intermediate to advanced web design techniques. Topics include customer expectations, advanced markup language, multimedia technologies, usability and accessibility practices, and techniques for the evaluation of web design. Upon completion, students should be able to employ advanced design techniques to create high impact and highly functional web sites.

Prerequisites: Take WEB 110 Minimum grade C

**WEB 214. Social Media. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0

This course introduces students to social media for organizations. Topics include social media, marketing strategy, brand presence, blogging, social media analytics and technical writing. Upon completion, students should be able to utilize popular social media platforms as part of a marketing strategy, and work with social media analytics tools.

**WEB 215. Advanced Markup and Scripting. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0

This course covers advanced programming skills required to design Internet applications. Emphasis is placed on programming techniques required to support Internet applications. Upon completion, students should be able to design, code, debug, and document Internet-based programming solutions to various real-world problems using an appropriate programming language.

Prerequisites: Take WEB 115 Minimum grade C

**WEB 220. Advanced Multimedia. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0

This is the second of two courses covering internet multimedia. Topics include use of advanced internet multimedia applications. Upon completion, students should be able to create interactive Internet multimedia presentations.

Prerequisites: Take WEB 120

**WEB 250. Database Driven Websites. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0

This course introduces dynamic (database-driven) website development. Topics include the use of basic database CRUD statements (create, read, update and delete) incorporated into web applications, as well as in software architecture principles. Upon completion, students should be able to design and develop database driven web applications according to industry standards.

Prerequisites: Take DBA 120 Minimum grade C

**WEB 251. Mobile Application Development II. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0

This course covers advanced applications and custom programming to develop applications for mobile devices. Topics include device capabilities, OS specific Software Development Kits (SDK), scripting for functionality and designing interactivity. Upon completion, students should be able to demonstrate effective programming techniques to develop advanced mobile applications.

Prerequisites: Take WEB 151 Minimum grade C

**WEB 289. Internet Technologies Project. 3.0 Credits.** Class-1.0. Clinical-0.0. Lab-4.0. Work-0.0

This course provides an opportunity to complete a significant Web technologies project from the design phase through implementation with minimal instructor support. Emphasis is placed on project definition, documentation, installation, testing, presentation, and training. Upon completion, students should be able to complete an Internet project from the definition phase through implementation.

Prerequisites: Take CTI 110 CTI 120 CTS 115 Minimum grade C

## Welding (WLD)

**WLD 110. Cutting Processes. 2.0 Credits.** Class-1.0. Clinical-0.0. Lab-3.0. Work-0.0

This course introduces oxy-fuel and plasma-arc cutting systems. Topics include safety, proper equipment setup, and operation of oxy-fuel and plasma-arc cutting equipment with emphasis on straight line, curve and bevel cutting. Upon completion, students should be able to oxy-fuel and plasma-arc cut metals of varying thickness.

**WLD 111. Oxy-Fuel Welding. 2.0 Credits.** Class-1.0. Clinical-0.0. Lab-3.0. Work-0.0

This course introduces the oxy-fuel welding process. Topics include safety, proper equipment setup, and operation of oxy-fuel welding equipment with emphasis on bead application, profile, and discontinuities. Upon completion, students should be able to oxy-fuel weld fillets and grooves on plate and pipe in various positions.

**WLD 112. Basic Welding Processes. 2.0 Credits.** Class-1.0. Clinical-0.0. Lab-3.0. Work-0.0

This course introduces basic welding and cutting. Emphasis is placed on beads applied with gases, mild steel fillers, and electrodes and the capillary action of solder. Upon completion, students should be able to set up welding and oxy-fuel equipment and perform welding, brazing, and soldering processes.

**WLD 115. SMAW (Stick) Plate. 5.0 Credits.** Class-2.0. Clinical-0.0. Lab-9.0. Work-0.0

This course introduces the shielded metal arc (stick) welding process. Emphasis is placed on padding, fillet, and groove welds in various positions with SMAW electrodes. Upon completion, students should be able to perform SMAW fillet and groove welds on carbon plate with prescribed electrodes.

**WLD 116. SMAW (stick) Plate/Pipe. 4.0 Credits.** Class-1.0. Clinical-0.0. Lab-9.0. Work-0.0

This course is designed to enhance skills with the shielded metal arc (stick) welding process. Emphasis is placed on advancing manipulative skills with SMAW electrodes on varying joint geometry. Upon completion, students should be able to perform groove welds on carbon steel with prescribed electrodes in the flat, horizontal, vertical, and overhead positions.

Prerequisites: Take WLD 115

**WLD 121. GMAW (MIG) FCAW/Plate. 4.0 Credits.** Class-2.0. Clinical-0.0. Lab-6.0. Work-0.0

This course introduces metal arc welding and flux core arc welding processes. Topics include equipment setup and fillet and groove welds with emphasis on application of GMAW and FCAW electrodes on carbon steel plate. Upon completion, students should be able to perform fillet welds on carbon steel with prescribed electrodes in the flat, horizontal, and overhead positions.

**WLD 122. GMAW (MIG) Plate/Pipe. 3.0 Credits.** Class-1.0. Clinical-0.0. Lab-6.0. Work-0.0

This course is designed to enhance skills with the gas metal arc (MIG) welding process. Emphasis is placed on advancing skills with the GMAW process making groove welds on carbon steel plate and pipe in various positions. Upon completion, students should be able to perform groove welds with prescribed electrodes on various joint geometry.

Prerequisites: Take WLD 121



**WLD 131. GTAW (TIG) Plate. 4.0 Credits.** Class-2.0. Clinical-0.0. Lab-6.0. Work-0.0

This course introduces the gas tungsten arc (TIG) welding process. Topics include correct selection of tungsten, polarity, gas, and proper filler rod with emphasis placed on safety, equipment setup, and welding techniques. Upon completion, students should be able to perform GTAW fillet and groove welds with various electrodes and filler materials.

**WLD 132. GTAW (TIG) Plate/Pipe. 3.0 Credits.** Class-1.0. Clinical-0.0. Lab-6.0. Work-0.0

This course is designed to enhance skills with the gas tungsten arc (TIG) welding process. Topics include setup, joint preparation, and electrode selection with emphasis on manipulative skills in all welding positions on plate and pipe. Upon completion, students should be able to perform GTAW welds with prescribed electrodes and filler materials on various joint geometry.

Prerequisites: Take WLD 131

**WLD 141. Symbols and Specifications. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0

This course introduces the basic symbols and specifications used in welding. Emphasis is placed on interpretation of lines, notes, welding symbols, and specifications. Upon completion, students should be able to read and interpret symbols and specifications commonly used in welding.

Prerequisites: Take DMA 010 DMA 020 DMA 030

**WLD 143. Welding Metallurgy. 2.0 Credits.** Class-1.0. Clinical-0.0. Lab-2.0. Work-0.0

This course introduces the concepts of welding metallurgy. Emphasis is placed on basic metallurgy, effects of welding on various metals, and metal classification and identification. Upon completion, students should be able to understand basic metallurgy, materials designation, and classification systems used in welding.

**WLD 145. Thermoplastic Welding. 2.0 Credits.** Class-1.0. Clinical-0.0. Lab-3.0. Work-0.0

This course introduces the thermoplastic welding processes and materials identification. Topics include filler material selection, identification, joint design, and equipment setup with emphasis on bead types and applications. Upon completion, students should be able to perform fillet and groove welds using thermoplastic materials.

**WLD 151. Fabrication I. 4.0 Credits.** Class-2.0. Clinical-0.0. Lab-6.0. Work-0.0

This course introduces the basic principles of fabrication. Emphasis is placed on safety, measurement, layout techniques, cutting, joining techniques, and the use of fabrication tools and equipment. Upon completion, students should be able to perform layout activities and operate various fabrication and material handling equipment.

Prerequisites: Take WLD 110 WLD 121 WLD 131 WLD 141

**WLD 152. Wrought Metals I. 4.0 Credits.** Class-2.0. Clinical-0.0. Lab-0.0. Work-0.0

This course provides a comprehensive overview of the history and the multifaceted skillsets that are required to join and shape ferrous and non-ferrous metals. Topics include heating methods and fire control, hand hammers, hand tools, forging, manual heating, heat treatment, and shaping functional and decorative metal objects. Upon completion, students should be able to select proper alloys, heat and use a variety of hand tools to create simple tools, and shape basic metal projects to produce functional and decorative metal objects, collars, and mortise and tenon joints.

Corequisites: Take WLD 112

**WLD 215. SMAW (stick) Pipe. 4.0 Credits.** Class-1.0. Clinical-0.0. Lab-9.0. Work-0.0

This course covers the knowledge and skills that apply to welding pipe. Topics include pipe positions, joint geometry, and preparation with emphasis placed on bead application, profile, and discontinuities. Upon completion, students should be able to perform SMAW welds to applicable codes on carbon steel pipe with prescribed electrodes in various positions.

Prerequisites: Take One: WLD 115 or WLD 116

**WLD 221. GMAW (MIG) Pipe. 3.0 Credits.** Class-1.0. Clinical-0.0. Lab-6.0. Work-0.0

This course covers the knowledge and skills that apply to welding pipe. Topics include pipe positions, joint geometry, and preparation with emphasis placed on bead application, profile, and discontinuities. Upon completion, students should be able to perform GMAW welds to applicable codes on pipe with prescribed electrodes in various positions.

Prerequisites: Take WLD 122

**WLD 231. GTAW (TIG) Pipe. 3.0 Credits.** Class-1.0. Clinical-0.0. Lab-6.0. Work-0.0

This course covers gas tungsten arc welding on pipe. Topics include joint preparation and fit up with emphasis placed on safety, GTAW welding technique, bead application, and joint geometry. Upon completion, students should be able to perform GTAW welds to applicable codes on pipe with prescribed electrodes and filler materials in various pipe positions.

Prerequisites: Take WLD 132

**WLD 251. Fabrication II. 3.0 Credits.** Class-1.0. Clinical-0.0. Lab-6.0. Work-0.0

This course covers advanced fabrication skills. Topics include advanced layout and assembly methods with emphasis on the safe and correct use of fabrication tools and equipment. Upon completion, students should be able to fabricate projects from working drawings.

Prerequisites: Take WLD 151

**WLD 252. Wrought Metals II. 4.0 Credits.** Class-2.0. Clinical-0.0. Lab-0.0. Work-0.0

This course covers ideas and techniques for designing, heating, shaping, and heat treatment of ferrous and non-ferrous metals, and the technical skills required for producing tools used in the welding studio. Topics include refined hammer control, power tool usage, metal lamination and differential hardening, tool design, alloy selection, hardening and tempering processes, and developing shop tooling. Upon completion, students should be able to identify and select appropriate metals and use traditional and contemporary metal-forming techniques to produce functional and decorative metal objects.

Corequisites: Take WLD 152

**WLD 261. Certification Practices. 2.0 Credits.** Class-1.0. Clinical-0.0. Lab-3.0. Work-0.0

This course covers certification requirements for industrial welding processes. Topics include techniques and certification requirements for prequalified joint geometry. Upon completion, students should be able to perform welds on carbon steel plate and/or pipe according to applicable codes.

Prerequisites: Take All: WLD 115, WLD 121, and WLD 131

Corequisites: Take WLD 215 and WLD 231

**WLD 262. Inspection & Testing. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0

This course introduces destructive and non-destructive testing methods. Emphasis is placed on safety, types and methods of testing, and the use of testing equipment and materials. Upon completion, students should be able to understand and/or perform a variety of destructive and non-destructive testing processes.

**WLD 265. Automated Welding/Cutting. 4.0 Credits.** Class-2.0. Clinical-0.0. Lab-6.0. Work-0.0

This course introduces automated welding equipment and processes. Topics include setup, programming, and operation of automated welding and cutting equipment. Upon completion, students should be able to set up, program, and operate automated welding and cutting equipment. Prerequisites: Take All: WLD 110 and WLD 121

**WLD 268. Robotic Gas Metal Arc Welding. 4.0 Credits.** Class-2.0. Clinical-0.0. Lab-0.0. Work-0.0

This course provides a comprehensive overview of the tasks and responsibilities required of the robotic welding technician. Topics include robotic and welding safety, proper equipment usage and care, robotic welding programming, various automated welding applications, automated Gas Metal Arc Welding (GMAW) processes, equipment controls and settings, and weld quality. Upon completion, students should be able to set up, program, operate, and successfully run robotic gas welding equipment for various welding applications.

**WLD 270. Orbital Welding TIG/Pipe. 4.0 Credits.** Class-2.0. Clinical-0.0. Lab-6.0. Work-0.0

This course introduces automated tungsten inert gas (TIG) welding hardware, equipment, and processes required to apply specific, accurate, automated, and consistently repetitive pipe welds. Emphasis is placed on proper identification of automated welding process variables, how each relates to the functionality of orbital equipment and components, and how changes in variables directly influence weld quality. Upon completion, students should be able to produce quality pipe welds through the appropriate operation and control of automated TIG welding equipment.

## Wheels of Learning (WOL)

**WOL 110. Basic Construction Skills. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0

This course introduces the student to basic safety, tools, and skills commonly found in the construction related trades. Topics include safety, basic math, blueprints, hand and power tools, and rigging. Upon completion, students should have successfully completed the Core Curricula as identified by the National center for Construction Education and Research.

## Work-Based Learning (WBL)

**WBL 110. World of Work. 1.0 Credit.** Class-1.0. Clinical-0.0. Lab-0.0. Work-0.0

This course covers basic knowledge necessary for gaining and maintaining employment. Topics include job search skills, work ethic, meeting employer expectations, workplace safety, and human relations. Upon completion, students should be able to successfully make the transition from school to work.

**WBL 111D. Work-Based Learning I Experience. 1.0 Credit.** Class-0.0. Clinical-0.0. Lab-0.0. Work-10.0

This course provides a work-based learning experience with a college-approved employer in an area related to the student's program of study. Emphasis is placed on integrating classroom learning with related work experience. Upon completion, students should be able to evaluate career selection, demonstrate employability skills, and satisfactorily perform work-related competencies.

**WBL 111M. Work-Based Learning I Experience. 1.0 Credit.** Class-0.0. Clinical-0.0. Lab-0.0. Work-10.0

This course provides a work-based learning experience with a college-approved employer in an area related to the student's program of study. Emphasis is placed on integrating classroom learning with related work experience. Upon completion, students should be able to evaluate career selection, demonstrate employability skills, and satisfactorily perform work-related competencies.

**WBL 111Z. Work-Based Learning I - Substance Abuse. 1.0 Credit.** Class-0.0. Clinical-0.0. Lab-0.0. Work-10.0

This course provides a work-based learning experience with a college-approved employer in an area related to the student's program of study. Emphasis is placed on integrating classroom learning with related work experience. Upon completion, students should be able to evaluate career selection, demonstrate employability skills, and satisfactorily perform work-related competencies.

**WBL 111K. Work-Based Learning I. 1.0 Credit.** Class-0.0. Clinical-0.0. Lab-0.0. Work-10.0

This course provides a work-based learning experience with a college-approved employer in an area related to the student's program of study. Emphasis is placed on integrating classroom learning with related work experience. Upon completion, students should be able to evaluate career selection, demonstrate employability skills, and satisfactorily perform work-related competencies.

**WBL 111E. Work-Based Learning I. 1.0 Credit.** Class-0.0. Clinical-0.0. Lab-0.0. Work-10.0

This course provides a work-based learning experience with a college-approved employer in an area related to the student's program of study. Emphasis is placed on integrating classroom learning with related work experience. Upon completion, students should be able to evaluate career selection, demonstrate employability skills, and satisfactorily perform work-related competencies.

**WBL 111I. Work-Based Learning I. 1.0 Credit.** Class-0.0. Clinical-0.0. Lab-0.0. Work-10.0

This course provides a work-based learning experience with a college-approved employer in an area related to the student's program of study. Emphasis is placed on integrating classroom learning with related work experience. Upon completion, students should be able to evaluate career selection, demonstrate employability skills, and satisfactorily perform work-related competencies.

**WBL 111U. Work-Based Learning I. 1.0 Credit.** Class-0.0. Clinical-0.0. Lab-0.0. Work-10.0

This course provides a work-based learning experience with a college-approved employer in an area related to the student's program of study. Emphasis is placed on integrating classroom learning with related work experience. Upon completion, students should be able to evaluate career selection, demonstrate employability skills, and satisfactorily perform work-related competencies.



**WBL 112G. Work-Based Learning I. 2.0 Credits.** Class-0.0. Clinical-0.0. Lab-0.0. Work-20.0

This course provides a work-based learning experience with a college-approved employer in an area related to the student's program of study. Emphasis is placed on integrating classroom learning with related work experience. Upon completion, students should be able to evaluate career selection, demonstrate employability skills, and satisfactorily perform work-related competencies.

**WBL 112J. Work-Based Learning I. 2.0 Credits.** Class-0.0. Clinical-0.0. Lab-0.0. Work-20.0

This course provides a work-based learning experience with a college-approved employer in an area related to the student's program of study. Emphasis is placed on integrating classroom learning with related work experience. Upon completion, students should be able to evaluate career selection, demonstrate employability skills, and satisfactorily perform work-related competencies.

**WBL 112S. Work-Based Learning I. 2.0 Credits.** Class-0.0. Clinical-0.0. Lab-0.0. Work-20.0

This course provides a work-based learning experience with a college-approved employer in an area related to the student's program of study. Emphasis is placed on integrating classroom learning with related work experience. Upon completion, students should be able to evaluate career selection, demonstrate employability skills, and satisfactorily perform work-related competencies.

**WBL 112H. Work-Based Learning I. 2.0 Credits.** Class-0.0. Clinical-0.0. Lab-0.0. Work-20.0

This course provides a work-based learning experience with a college-approved employer in an area related to the student's program of study. Emphasis is placed on integrating classroom learning with related work experience. Upon completion, students should be able to evaluate career selection, demonstrate employability skills, and satisfactorily perform work-related competencies.

**WBL 112R. Work-Based Learning I. 2.0 Credits.** Class-0.0. Clinical-0.0. Lab-0.0. Work-20.0

This course provides a work-based learning experience with a college-approved employer in an area related to the student's program of study. Emphasis is placed on integrating classroom learning with related work experience. Upon completion, students should be able to evaluate career selection, demonstrate employability skills, and satisfactorily perform work-related competencies.

**WBL 112T. Work-Based Learning I. 2.0 Credits.** Class-0.0. Clinical-0.0. Lab-0.0. Work-20.0

This course provides a work-based learning experience with a college-approved employer in an area related to the student's program of study. Emphasis is placed on integrating classroom learning with related work experience. Upon completion, students should be able to evaluate career selection, demonstrate employability skills, and satisfactorily perform work-related competencies.

**WBL 112Q. Work-Based Learning I. 2.0 Credits.** Class-0.0. Clinical-0.0. Lab-0.0. Work-20.0

This course provides a work-based learning experience with a college-approved employer in an area related to the student's program of study. Emphasis is placed on integrating classroom learning with related work experience. Upon completion, students should be able to evaluate career selection, demonstrate employability skills, and satisfactorily perform work-related competencies.

**WBL 112P. Work-Based Learning I. 2.0 Credits.** Class-0.0. Clinical-0.0. Lab-0.0. Work-20.0

This course provides a work-based learning experience with a college-approved employer in an area related to the student's program of study. Emphasis is placed on integrating classroom learning with related work experience. Upon completion, students should be able to evaluate career selection, demonstrate employability skills, and satisfactorily perform work-related competencies.

**WBL 112M. Work-Based Learning I. 2.0 Credits.** Class-0.0. Clinical-0.0. Lab-0.0. Work-20.0

This course provides a work-based learning experience with a college-approved employer in an area related to the student's program of study. Emphasis is placed on integrating classroom learning with related work experience. Upon completion, students should be able to evaluate career selection, demonstrate employability skills, and satisfactorily perform work-related competencies.

**WBL 112W. Work-Based Learning I. 2.0 Credits.** Class-0.0. Clinical-0.0. Lab-0.0. Work-20.0

This course provides a work-based learning experience with a college-approved employer in an area related to the student's program of study. Emphasis is placed on integrating classroom learning with related work experience. Upon completion, students should be able to evaluate career selection, demonstrate employability skills, and satisfactorily perform work-related competencies.

**WBL 112. Work-Based Learning I. 2.0 Credits.** Class-0.0. Clinical-0.0. Lab-0.0. Work-20.0

This course provides a work-based learning experience with a college-approved employer in an area related to the student's program of study. Emphasis is placed on integrating classroom learning with related work experience. Upon completion, students should be able to evaluate career selection, demonstrate employability skills, and satisfactorily perform work-related competencies.

**WBL 114. Work-Based Learning I. 4.0 Credits.** Class-0.0. Clinical-0.0. Lab-0.0. Work-40.0

This course provides a work-based learning experience with a college-approved employer in an area related to the student's program of study. Emphasis is placed on integrating classroom learning with related work experience. Upon completion, students should be able to evaluate career selection, demonstrate employability skills, and satisfactorily perform work-related competencies.

**WBL 115Z. Work-Based Learning Seminar I. 1.0 Credit.** Class-1.0. Clinical-0.0. Lab-0.0. Work-0.0

This course description may be written by the individual colleges. The seminar class is a forum of proactive learning in which students exchange ideas, share information and discuss mutual issues and problems. The seminar includes opportunities for reflective dialogue, support, relationship development and a variety of new learning experiences. Human Services - Substance Abuse.

Corequisites: Take One: WBL 111, WBL 112, WBL 113 or WBL 114

**WBL 115F. Work-Based Learning Seminar I. 1.0 Credit.** Class-1.0. Clinical-0.0. Lab-0.0. Work-0.0

This course description may be written by the individual colleges.

Corequisites: Take One: WBL 111, WBL 112, WBL 113 or WBL 114



**WBL 115I. Work-Based Learning Seminar I. 1.0 Credit.** Class-1.0. Clinical-0.0. Lab-0.0. Work-0.0

This course description may be written by the individual colleges. Students will use the observation in their Work-Based learning experience to analyze, discourse styles, group dynamics, conversational exchanges, turn taking, cross talking and side talking to determine the function and purpose of each within that setting. Challenging vocabulary and protocol issues will be isolated and discussed in a personal journal. The interpretation will be analyzed identifying patterns, successful and non-successful strategies and miscues. Students will project themselves into the observed situation and discuss how they would manage the situation, and identify issues, which they cannot manage at this point, and discuss how they could resolve the situation by identifying what they would need to be able to handle the interpretation.

Corequisites: Take One: WBL 111, WBL 112, WBL 113 or WBL 114

**WBL 115E. Work-Based Learning Seminar I - BioMed. 1.0 Credit.**

Class-1.0. Clinical-0.0. Lab-0.0. Work-0.0

This course description may be written by the individual colleges.

Prerequisites: Take WBL 111E WBL 112E

Corequisites: Take One: WBL 111, WBL 112, WBL 113 or WBL 114

**WBL 115Y. Work-Based Learning Seminar I. 1.0 Credit.** Class-1.0.

Clinical-0.0. Lab-0.0. Work-0.0

This course description may be written by the individual colleges. This course provides a work-based learning in Developmental Disabilities.

Corequisites: Take One: WBL 111, WBL 112, WBL 113 or WBL 114

**WBL 115. Work-Based Learning Seminar I. 1.0 Credit.** Class-1.0.

Clinical-0.0. Lab-0.0. Work-0.0

This course description may be written by the individual colleges.

Corequisites: Take One: WBL 111, WBL 112, WBL 113 or WBL 114

**WBL 121F. Work-Based Learning II Experience. 1.0 Credit.** Class-0.0.

Clinical-0.0. Lab-0.0. Work-10.0

This course provides a work-based learning experience with a college-approved employer in an area related to the student's program of study. Emphasis is placed on integrating classroom learning with related work experience. Upon completion, students should be able to evaluate career selection, demonstrate employability skills, and satisfactorily perform work-related competencies.

**WBL 121I. Work-Based Learning II Experience. 1.0 Credit.** Class-0.0.

Clinical-0.0. Lab-0.0. Work-10.0

This course provides a work-based learning experience with a college-approved employer in an area related to the student's program of study. Emphasis is placed on integrating classroom learning with related work experience. Upon completion, students should be able to evaluate career selection, demonstrate employability skills, and satisfactorily perform work-related competencies.

**WBL 121Z. Work-Based Learning II. 1.0 Credit.** Class-0.0. Clinical-0.0.

Lab-0.0. Work-10.0

This course provides a work-based learning experience with a college-approved employer in an area related to the student's program of study. Emphasis is placed on integrating classroom learning with related work experience. Upon completion, students should be able to evaluate career selection, demonstrate employability skills, and satisfactorily perform work-related competencies. Human Services - Substance Abuse.

**WBL 121W. Work-Based Learning II. 1.0 Credit.** Class-0.0. Clinical-0.0. Lab-0.0. Work-10.0

This course provides a work-based learning experience with a college-approved employer in an area related to the student's program of study. Emphasis is placed on integrating classroom learning with related work experience. Upon completion, students should be able to evaluate career selection, demonstrate employability skills, and satisfactorily perform work-related competencies.

**WBL 121E. Work-Based Learning II. 1.0 Credit.** Class-0.0. Clinical-0.0.

Lab-0.0. Work-10.0

This course provides a work-based learning experience with a college-approved employer in an area related to the student's program of study. Emphasis is placed on integrating classroom learning with related work experience. Upon completion, students should be able to evaluate career selection, demonstrate employability skills, and satisfactorily perform work-related competencies.

**WBL 121M. Work-Based Learning II. 1.0 Credit.** Class-0.0. Clinical-0.0.

Lab-0.0. Work-10.0

This course provides a work-based learning experience with a college-approved employer in an area related to the student's program of study. Emphasis is placed on integrating classroom learning with related work experience. Upon completion, students should be able to evaluate career selection, demonstrate employability skills, and satisfactorily perform work-related competencies.

**WBL 121Q. Work-Based Learning II. 1.0 Credit.** Class-0.0. Clinical-0.0.

Lab-0.0. Work-10.0

This course provides a work-based learning experience with a college-approved employer in an area related to the student's program of study. Emphasis is placed on integrating classroom learning with related work experience. Upon completion, students should be able to evaluate career selection, demonstrate employability skills, and satisfactorily perform work-related competencies.

**WBL 121P. Work-Based Learning II. 1.0 Credit.** Class-0.0. Clinical-0.0.

Lab-0.0. Work-10.0

This course provides a work-based learning experience with a college-approved employer in an area related to the student's program of study. Emphasis is placed on integrating classroom learning with related work experience. Upon completion, students should be able to evaluate career selection, demonstrate employability skills, and satisfactorily perform work-related competencies.

**WBL 121Y. Work-Based Learning II. 1.0 Credit.** Class-0.0. Clinical-0.0.

Lab-0.0. Work-10.0

This course provides a work-based learning experience with a college-approved employer in an area related to the student's program of study. Emphasis is placed on integrating classroom learning with related work experience. Upon completion, students should be able to evaluate career selection, demonstrate employability skills, and satisfactorily perform work-related competencies.

**WBL 121. Work-Based Learning II. 1.0 Credit.** Class-0.0. Clinical-0.0.

Lab-0.0. Work-10.0

This course provides a work-based learning experience with a college-approved employer in an area related to the student's program of study. Emphasis is placed on integrating classroom learning with related work experience. Upon completion, students should be able to evaluate career selection, demonstrate employability skills, and satisfactorily perform work-related competencies.

**WBL 122R. Work-Based Learning II. 2.0 Credits.** Class-0.0. Clinical-0.0. Lab-0.0. Work-20.0

This course provides a work-based learning experience with a college-approved employer in an area related to the student's program of study. Emphasis is placed on integrating classroom learning with related work experience. Upon completion, students should be able to evaluate career selection, demonstrate employability skills, and satisfactorily perform work-related competencies.

**WBL 122K. Work-Based Learning II - Office Admin. 2.0 Credits.** Class-0.0. Clinical-0.0. Lab-0.0. Work-20.0

This course provides a work-based learning experience with a college-approved employer in an area related to the student's program of study. Emphasis is placed on integrating classroom learning with related work experience. Upon completion, students should be able to evaluate career selection, demonstrate employability skills, and satisfactorily perform work-related competencies.

**WBL 122W. Work-Based Learning II. 2.0 Credits.** Class-0.0. Clinical-0.0. Lab-0.0. Work-20.0

This course provides a work-based learning experience with a college-approved employer in an area related to the student's program of study. Emphasis is placed on integrating classroom learning with related work experience. Upon completion, students should be able to evaluate career selection, demonstrate employability skills, and satisfactorily perform work-related competencies.

**WBL 122E. Work-Based Learning II. 2.0 Credits.** Class-0.0. Clinical-0.0. Lab-0.0. Work-20.0

This course provides a work-based learning experience with a college-approved employer in an area related to the student's program of study. Emphasis is placed on integrating classroom learning with related work experience. Upon completion, students should be able to evaluate career selection, demonstrate employability skills, and satisfactorily perform work-related competencies.

**WBL 122Q. Work-Based Learning II. 2.0 Credits.** Class-0.0. Clinical-0.0. Lab-0.0. Work-20.0

This course provides a work-based learning experience with a college-approved employer in an area related to the student's program of study. Emphasis is placed on integrating classroom learning with related work experience. Upon completion, students should be able to evaluate career selection, demonstrate employability skills, and satisfactorily perform work-related competencies.

**WBL 122P. Work-Based Learning II. 2.0 Credits.** Class-0.0. Clinical-0.0. Lab-0.0. Work-20.0

This course provides a work-based learning experience with a college-approved employer in an area related to the student's program of study. Emphasis is placed on integrating classroom learning with related work experience. Upon completion, students should be able to evaluate career selection, demonstrate employability skills, and satisfactorily perform work-related competencies.

**WBL 122. Work-Based Learning II. 2.0 Credits.** Class-0.0. Clinical-0.0. Lab-0.0. Work-20.0

This course provides a work-based learning experience with a college-approved employer in an area related to the student's program of study. Emphasis is placed on integrating classroom learning with related work experience. Upon completion, students should be able to evaluate career selection, demonstrate employability skills, and satisfactorily perform work-related competencies.

**WBL 125F. Work-Based Learning Seminar II. 1.0 Credit.** Class-1.0. Clinical-0.0. Lab-0.0. Work-0.0

This course description may be written by the individual colleges. This seminar class is a forum of proactive learning in which students exchange ideas, share information and discuss mutual issues and problems. The seminar includes opportunities for reflective dialogue, support, relationship development and a variety of new learning experiences.

Corequisites: Take One: WBL 121, WBL 122, WBL 123 or WBL 124

**WBL 125I. Work-Based Learning Seminar II. 1.0 Credit.** Class-1.0. Clinical-0.0. Lab-0.0. Work-0.0

This course description may be written by the individual colleges. This seminar class is a forum of proactive learning in which students exchange ideas, share information and discuss mutual issues and problems. The seminar includes opportunities for reflective dialogue, support, relationship development and a variety of new learning experiences. Human Services - Substance Abuse.

Corequisites: Take One: WBL 121, WBL 122, WBL 123 or WBL 124

**WBL 125Z. Work-Based Learning Seminar II. 1.0 Credit.** Class-1.0. Clinical-0.0. Lab-0.0. Work-0.0

This course description may be written by the individual colleges. Human Services - Substance Abuse.

Corequisites: Take One: WBL 121, WBL 122, WBL 123 or WBL 124

**WBL 125Y. Work-Based Learning Seminar II. 1.0 Credit.** Class-1.0. Clinical-0.0. Lab-0.0. Work-0.0

This course description may be written by the individual colleges.

Corequisites: Take One: WBL 121, WBL 122, WBL 123 or WBL 124

**WBL 125E. Work-Based Learning Seminar II - BIOMED. 1.0 Credit.** Class-1.0. Clinical-0.0. Lab-0.0. Work-0.0

This course description may be written by the individual colleges.

Corequisites: Take One: WBL 121, WBL 122, WBL 123 or WBL 124

**WBL 125. Work-Based Learning Seminar II. 1.0 Credit.** Class-1.0. Clinical-0.0. Lab-0.0. Work-0.0

This course description may be written by the individual colleges.

Corequisites: Take One: WBL 121, WBL 122, WBL 123 or WBL 124

**WBL 131M. Work-Based Learning III. 1.0 Credit.** Class-0.0. Clinical-0.0. Lab-0.0. Work-10.0

This course provides a work-based learning experience with a college-approved employer in an area related to the student's program of study. Emphasis is placed on integrating classroom learning with related work experience. Upon completion, students should be able to evaluate career selection, demonstrate employability skills, and satisfactorily perform work-related competencies.

**WBL 131W. Work-Based Learning III. 1.0 Credit.** Class-0.0. Clinical-0.0. Lab-0.0. Work-10.0

This course provides a work-based learning experience with a college-approved employer in an area related to the student's program of study. Emphasis is placed on integrating classroom learning with related work experience. Upon completion, students should be able to evaluate career selection, demonstrate employability skills, and satisfactorily perform work-related competencies.

**WBL 131P. Work-Based Learning III. 1.0 Credit.** Class-0.0. Clinical-0.0. Lab-0.0. Work-10.0

This course provides a work-based learning experience with a college-approved employer in an area related to the student's program of study. Emphasis is placed on integrating classroom learning with related work experience. Upon completion, students should be able to evaluate career selection, demonstrate employability skills, and satisfactorily perform work-related competencies.

**WBL 131. Work-Based Learning III. 1.0 Credit.** Class-0.0. Clinical-0.0. Lab-0.0. Work-10.0

This course provides a work-based learning experience with a college-approved employer in an area related to the student's program of study. Emphasis is placed on integrating classroom learning with related work experience. Upon completion, students should be able to evaluate career selection, demonstrate employability skills, and satisfactorily perform work-related competencies.

**WBL 132R. Work-Based Learning III - Automotive. 2.0 Credits.**

Class-0.0. Clinical-0.0. Lab-0.0. Work-20.0

This course provides a work-based learning experience with a college-approved employer in an area related to the student's program of study. Emphasis is placed on integrating classroom learning with related work experience. Upon completion, students should be able to evaluate career selection, demonstrate employability skills, and satisfactorily perform work-related competencies.

**WBL 132T. Work-Based Learning III. 2.0 Credits.** Class-0.0. Clinical-0.0. Lab-0.0. Work-20.0

This course provides a work-based learning experience with a college-approved employer in an area related to the student's program of study. Emphasis is placed on integrating classroom learning with related work experience. Upon completion, students should be able to evaluate career selection, demonstrate employability skills, and satisfactorily perform work-related competencies.

**WBL 132. Work-Based Learning III. 2.0 Credits.** Class-0.0. Clinical-0.0. Lab-0.0. Work-20.0

This course provides a work-based learning experience with a college-approved employer in an area related to the student's program of study. Emphasis is placed on integrating classroom learning with related work experience. Upon completion, students should be able to evaluate career selection, demonstrate employability skills, and satisfactorily perform work-related competencies.

**WBL 211. Work-Based Learning IV. 1.0 Credit.** Class-0.0. Clinical-0.0. Lab-0.0. Work-10.0

This course provides a work-based learning experience with a college-approved employer in an area related to the student's program of study. Emphasis is placed on integrating classroom learning with related work experience. Upon completion, students should be able to evaluate career selection, demonstrate employability skills, and satisfactorily perform work-related competencies.

**WBL 212R. Work-Based Learning IV. 2.0 Credits.** Class-0.0.

Clinical-0.0. Lab-0.0. Work-20.0

This course provides a work-based learning experience with a college-approved employer in an area related to the student's program of study. Emphasis is placed on integrating classroom learning with related work experience. Upon completion, students should be able to evaluate career selection, demonstrate employability skills, and satisfactorily perform work-related competencies.

**WBL 212. Work-Based Learning IV. 2.0 Credits.** Class-0.0. Clinical-0.0. Lab-0.0. Work-20.0

This course provides a work-based learning experience with a college-approved employer in an area related to the student's program of study. Emphasis is placed on integrating classroom learning with related work experience. Upon completion, students should be able to evaluate career selection, demonstrate employability skills, and satisfactorily perform work-related competencies.

**WBL 221T. Work-Based Learning V. 1.0 Credit.** Class-0.0. Clinical-0.0. Lab-0.0. Work-10.0

This course provides a work-based learning experience with a college-approved employer in an area related to the student's program of study. Emphasis is placed on integrating classroom learning with related work experience. Upon completion, students should be able to evaluate career selection, demonstrate employability skills, and satisfactorily perform work-related competencies.

**WBL 221E. Work-Based Learning V. 1.0 Credit.** Class-0.0. Clinical-0.0. Lab-0.0. Work-10.0

This course provides a work-based learning experience with a college-approved employer in an area related to the student's program of study. Emphasis is placed on integrating classroom learning with related work experience. Upon completion, students should be able to evaluate career selection, demonstrate employability skills, and satisfactorily perform work-related competencies.

**WBL 221. Work-Based Learning V. 1.0 Credit.** Class-0.0. Clinical-0.0. Lab-0.0. Work-10.0

This course provides a work-based learning experience with a college-approved employer in an area related to the student's program of study. Emphasis is placed on integrating classroom learning with related work experience. Upon completion, students should be able to evaluate career selection, demonstrate employability skills, and satisfactorily perform work-related competencies.

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## Academic Related (ACA)

**ACA 8118. College Study Skills for Non-Native Speakers. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

**ACA 8200. Preparing for the SAT I. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This course is designed to give the student an understanding of the SAT and how it is scored. This course will also provide strategies on how to take the SAT and how to answer specific types of questions. Emphasis will be placed on general strategies for the entire test, along with specific strategies for all types of math and verbal questions.

## Accounting (ACC)

**ACC 7005. Cost Accounting and Management. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

Review the principles and objectives of cost accounting, production control, and inventory control, as they relate to management decision making and control processes within a company. Topics covered are Cost Accounting Fundamentals, Balancing of the 3 Factors - Cost, Volume & Profit, Concept of Relevant Information & Decision Making, Activity Based Costing, Cost Allocation Techniques, and Cost Variances & Control.

**ACC 7006. Introduction to Peachtree Accounting 2012. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

Handle accounting tasks quickly and easily with Peachtree Accounting 2012! With the help of hands-on activities and step-by-step instructions, you'll quickly master all the skills you need to handle your routine accounting needs. First, you'll learn to set up accounts for vendors, customers, and inventory items. Next, you'll master the simple steps for creating invoices, collecting payments, paying bills, and printing checks. After that, you'll find out how to make journal entries and create trial balances. And what about those tedious end-of-month procedures? With Peachtree, as you'll see, they're a snap. Finally, you'll discover how to produce detailed financial reports that put the information you need right at your fingertips. If you find day-to-day accounting a struggle, Peachtree is the perfect solution for you. With the power of this software on your side, you'll breeze through those routine accounting chores you used to dread! Offered in partnership with ed2go.

**ACC 7007. Accounting Fundamentals. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

Increase your financial awareness while also gaining a marketable skill. You'll learn the basics of double-entry bookkeeping, as well as how to analyze and record financial transactions. Get hands-on experience with handling accounts receivable, accounts payable, payroll procedures, sales taxes and various common banking activities.

**ACC 7008. Accounting Fundamentals II. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This course builds on content from Accounting Fundamentals to provide you with an understanding of corporate accounting practices. Explore topics including special journals, uncollectible accounts receivable, plant assets, depreciation, notes and interest, accrued revenue and expenses, dividends, retained earnings and various financial reports for corporations.

**ACC 7009. Administrative Assistant Applications. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

Discover how time management, accounting, business law, organizational behavior and management affect administrative assistant responsibilities and activities. Learn the basics of accounting, including the general ledger and key accounting terms, and see how financial statements and controls help keep your organization moving in a positive direction. Understand the fundamentals of business law, contracts and the principal-agency relationship; discover ethics and organizational politics; and understand the basics of human resources management.

**ACC 7010. Understanding Financial Statements. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This course offers the student who needs to know more about financial statements, a tool that provides a straightforward approach to the structure of financial statements and how they provide a true financial picture of a company. The primary goal is to gain a basic understanding of how a Balance Sheet, Income Statement, and Cash Flow Statement work. This course will take the student through the construction of financial statements using actual company financials.



**ACC 7210. Implementing Effective Internal Controls for Cash-Religious Organizations. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

Many religious organizations may not have sufficient internal controls in place, or the ones that are in place may not be as strong as they should be. A system of strong internal controls is an integral part of any organization's financial well-being. Specifically in the cash handling area, controls are put in to help protect the organization from theft and loss and to give the organization assurance their cash and bank account assets are secure and properly recorded. Implementing effective internal controls for cash can be an overwhelming responsibility. This powerful four hour seminar geared toward religious organizations will give valuable information on how to put in place necessary safeguards.

**ACC 7211. IRS Requirements for Employee Payroll and Expenses - Religious Organizations. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

The IRS Tax Code is a complicated document for many but for smaller churches and religious organizations it can be especially overwhelming. It is important to know and understand the IRS special tax rules that apply to churches and religious organizations as defined in Internal Revenue Code (IRC). Understanding your tax exempt status is vital to applying that exemption as it relates to employee payments and expenses.

## Air Cond, Heating, and Refrig (AHR)

**AHR 7000. Introduction to Brazing. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

**AHR 7010. Air Conditioning Systems. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

Upon completion of this course students will understand the basic fundamentals of environmental control systems for HVAC and will apply this knowledge to troubleshoot a cooling system.

## Alternative Energy Technology (ALT)

**ALT 7200. Introduction to Alternative Energy. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

Students will learn the concepts of solar energy, wind energy, biofuels, geothermal energy, tidal energy, and solar thermal energy.

## American Institute of Banking (AIB)

**AIB 8970. Design in Operations of Building Systems Part II. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

Due to increasing demand for economy and energy conservation property and facility managers must develop and maintain an efficient building environment with a working knowledge of building systems their care and maintain.

## Appraisal (APP)

**APP 7144. The Uniform Standards of Professional Appraisal Practice (USPAP). 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This National Uniform Standards of Professional Appraisal Practice (USPAP) course fulfills the 15-hour requirement as established by the Appraiser Qualification Board (AQB) and The Appraisal Foundation. Those seeking to become a Registered Trainee must complete APP 7201 and APP 7202 prior to taking this course.

Corequisites: Take APP 7203 minimum grade S

**APP 7145. National USPAP Update (7 Hour). 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This course focuses on the changes to the 2005 edition of the Uniform Standards of Professional Appraisal Practice (USPAP). It also addresses sections of USPAP that have not been changed but have been identified as problem areas. This course is intended to fulfill the seven-hour requirement as established by the Appraisal Qualifications Board (AQB) of The Appraisal Foundation.

**APP 7201. Basic Appraisal Principles. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

Explore the appraisal process through discussion of appraisal principles and practical examples. This course meets the pre-qualifying criteria, as established by the North Carolina Appraisal Board. This is the first course in the appraisal pre-licensing series and must be taken first.

**APP 7202. Basic Appraisal Procedures. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

Enhance your basic appraisal knowledge with the various approaches to property valuation through the practical application of appraisal procedures. This course meets the pre-qualifying criteria, as established by the North Carolina Appraisal Board. Those seeking to become a Registered Trainee must complete APP 7201 prior to taking this course. Corequisites: Take APP 7201 minimum grade S

**APP 7203. Market Analysis and Highest and Best Use. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

Students will gain the tools needed to properly collect and analyze market data and determine a property's highest and best use. This course meets the pre-qualifying criteria, as established by the North Carolina Appraisal Board. Those seeking to become a Registered Trainee must complete APP 7201 and APP 7202 prior to taking this course.

**APP 7205. Residential Sales Comparison and Income Approach. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This course offers a basic understanding and knowledge of the residential sales comparison and income approaches to appraisal. It includes the valuation principles and procedures applicable to both approaches. With the aid of case studies, students will develop and apply the techniques for market analysis, including the application and use of matched pairs and capitalization rates and gross rental multipliers. There is a discussion on cash and finance equivalency. Students will learn how to apply and defend the rationale behind market adjustments. The course includes a discussion of current Fannie Mae and Freddie Mac Guidelines and relevant USPAP requirements, and introduces students to the methods of appraising income properties. A combination of theory and hands-on examples provides practical applications of real estate appraisal procedures. A calculator is recommended.

**APP 7206. Supervisory Appraiser / Trainee Appraiser. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This four-hour course will address the national minimum requirements, responsibilities, and expectations for Trainee Appraisers and Supervisory Appraisers as set by the Appraiser Qualifications Board.

**APP 7301. Commercial Appraisal Review Process. 0.0 Hours.**

Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This course is designed for lenders and loan originators who must review appraisals of commercial properties.

## Architecture (ARC)

**ARC 7000. Construction Document Analysis. 0.0 Hours. Class-440.0.**

Clinical-0.0. Lab-0.0. Work-0.0

## Automotive (AUT)

**AUT 7253. Automotive Electrical Fundamentals. 0.0 Hours.**

Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

**AUT 7254. Automotive Electrical Fundamentals. 0.0 Hours.**

Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

**AUT 7255. Mechanical Brake Systems Ac Delco. 0.0 Hours.**

Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

**AUT 8500. Automotive New Product Training. 0.0 Hours. Class-440.0.**

Clinical-0.0. Lab-0.0. Work-0.0

**AUT 8700. Automotive Air Brush Techniques. 0.0 Hours. Class-440.0.**

Clinical-0.0. Lab-0.0. Work-0.0

This is a beginners level course covering the basics in air brush techniques, color matching, tinting, and graphics for painting freehand designs on automobiles.

## Automotive Body Repair (ABI)

**ABI 7009. Non-Structural Repair I. 0.0 Hours. Class-440.0. Clinical-0.0.**

Lab-0.0. Work-0.0

This course introduces safety, tools, and the basic fundamentals of body repair. Topics include shop safety, damage analysis, tools and equipment, repair techniques, materials selection, materials usage, and other related topics. Upon completion, students should be able to identify and repair minor direct and indirect damage including removal/repairing/ replacing of body panels to accepted standards.

**ABI 7011. Non-Structural Repair II. 0.0 Hours. Class-440.0. Clinical-0.0.**

Lab-0.0. Work-0.0

This course covers safety, tools, and advanced body repair. Topics include shop safety, damage analysis, tools and equipment, advanced repair techniques, materials selection, materials usage, movable glass, and other related topics. Upon completion, students should be able to identify and repair or replace direct and indirect damage to accepted standards including movable glass and hardware.

**ABI 7013. Structural Repair I. 0.0 Hours. Class-440.0. Clinical-0.0.**

Lab-0.0. Work-0.0

This course introduces safety, equipment, structural damage analysis, and damage repairs. Topics include shop safety, design and construction, structural analysis and measurement, equipment, structural glass, repair techniques, and other related topics. Upon completion, students should be able to analyze and perform repairs to a vehicle which has received light/moderate structural damage.

**ABI 7015. Structural Repair II. 0.0 Hours. Class-440.0. Clinical-0.0.**

Lab-0.0. Work-0.0

This course provides an in-depth study of structural damage analysis and repairs to vehicles that have received moderate to heavy structural damage. Topics include shop safety, structural analysis and measurement, equipment, structural glass, advanced repair techniques, structural component replacement and alignment, and other related topics. Upon completion, students should be able to analyze and perform repairs according to industry standards.

**ABI 7017. Autobody MIG Welding. 0.0 Hours. Class-440.0. Clinical-0.0.**

Lab-0.0. Work-0.0

This course covers the terms and procedures for welding the various metals found in today's autobody repair industry with an emphasis on personal/environmental safety. Topics include safety and precautionary measures, setup/operation of MIG equipment, metal identification methods, types of welds/joints, techniques, inspection methods, and other related topics. Upon completion, students should be able to demonstrate a basic knowledge of welding operations and safety procedures according to industry standards.

**ABI 7019. Painting and Refinishing I. 0.0 Hours. Class-440.0.**

Clinical-0.0. Lab-0.0. Work-0.0

This course introduces the proper procedures for using automotive refinishing equipment and materials in surface preparation and application. Topics include federal, state, and local regulations, personal safety, refinishing equipment and materials, surface preparation, masking, application techniques, and other related topics. Upon completion, students should be able to identify and use proper equipment and materials in refinishing following accepted industry standards.

**ABI 7021. Painting and Refinishing II. 0.0 Hours. Class-440.0.**

Clinical-0.0. Lab-0.0. Work-0.0

This course covers advanced painting techniques and technologies with an emphasis on identifying problems encountered by the refinishing technician. Topics include materials application, color matching, correction of refinishing problems, and other related topics. Upon completion, students should be able to perform spot, panel, and overall refinishing repairs and identify and correct refinish problems.

**ABI 7023. Special Finishes. 0.0 Hours. Class-440.0. Clinical-0.0.**

Lab-0.0. Work-0.0

This course introduces multistage finishes, custom painting, and protective coatings. Topics include base coats, advanced intermediate coats, clear coats, and other related topics. Upon completion, students should be able to identify and apply specialized finishes based on accepted industry standards.

**ABI 7025. Plastic and Adhesives. 0.0 Hours. Class-440.0. Clinical-0.0.**

Lab-0.0. Work-0.0

This course covers safety, plastic and adhesive identification, and the various repair methods of automotive plastic components. Topics include safety, identification, preparation, material selection, and the various repair procedures including refinishing. Upon completion, students should be able to identify, remove, repair, and/or replace automotive plastic components in accordance with industry standards.

## Baking and Pastry Arts (BPA)

**BPA 7001. Baking and Pastry Arts Information Session. 0.0 Hours.**

Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This class is for students needing information on the baking program which includes field trips.

## Biology (BIO)

**BIO 7000. Introduction to Biology. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This course will help you understand the structure and function of the human body at the level of your tiniest living components-your cells. You'll also learn about DNA-what it is, what it does, and even a little bit about how forensic scientists use it to solve crimes. The knowledge you'll gain from this course will prepare you for more advanced courses in human anatomy and physiology.

**BIO 7002. Human Anatomy and Physiology. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

Discover the nature of matter and review the principles of chemistry that are important to human physiology while placing emphasis on the organization of the human body and the differences between nonliving matter and living organisms. Learn about cell anatomy and physiology, principles of genetics, skeletal and muscular systems, circulatory and respiratory systems, the endocrine system and functions of the different organ systems. By the end of this course, you'll have a greater appreciation and understanding of the human body.

**BIO 7003. Human Anatomy and Physiology II. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

Learn the basic characteristics of the four main types of tissues, the general and special senses, cellular metabolism, body chemistry, and significant events in the life span, from fertilization through old age.

## Blueprint Reading (BPR)

**BPR 7000. Basic Blueprint Reading. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

**BPR 7002. Blueprint Reading and Estimating. 0.0 Hours.** Class-72.0. Clinical-0.0. Lab-0.0. Work-0.0

A course covering the fundamentals of reading and interpreting residential blueprints and estimating the quantities of materials and labor required to construct a house. Use of current technology (CADD and BIM) will be introduced and discussed.

**BPR 7007. Blueprint Reading for General Construction. 0.0 Hours.** Class-72.0. Clinical-0.0. Lab-0.0. Work-0.0

This course is designed for construction supervisors and others currently working in the industry. It includes a comprehensive review of those sections of the North Carolina Residential Building Code applicable to Mecklenburg County residential construction. The class also includes a review of applicable state and local code interpretations, and Mecklenburg County's code inspection procedures. A County Code Enforcement Official(s) will observe each class, and will conduct an inspection field trip where students will observe an actual code inspection, and have an opportunity to ask questions regarding the inspection and to discuss their concerns.

**BPR 7013. Blueprint Rdn & Nc Residential Bldg Code For Carpenters. 0.0 Hours.** Class-72.0. Clinical-0.0. Lab-0.0. Work-0.0

This course is designed specifically for current residential carpenters who want a better understanding of plan reading, the building codes, and the industry standards that govern carpentry operations. Competency testing is required for certification in blueprint reading (NCCER Wheels of Learning Module # 00105 and 27201-98. Approximately 28 hours of this course is about blueprints, with the remainder focused on code.

**BPR 7017. Blueprint Reading for General Construction (Spanish). 0.0 Hours.** Class-72.0. Clinical-0.0. Lab-0.0. Work-0.0

Este curso es diseñado para enseñar a aprendices de Construcción Commercial, como leer planos de construcción en general. curso básico y se enseña en español.

**BPR 8000. Print reading and scheduling for Industry. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This course is designed for construction industry employees and employers. This course utilizes the NCCER curriculum and offers competencies in the following modules: Introduction to print and elevations reading, planning and scheduling. Topics covered include basic construction math and blueprint reading planning and scheduling. Estimating for contracts based on blueprints will not be covered.

## Business (BUS)

**BUS 7002. Leadership Training - BLUM. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

Leadership training for supervisors and managers. This class will cover all areas of leadership: Leadership Generalities, Communication, Leadership Styles, Conflict Management, Intercultural Communication, Teamwork, Time Management, Continuous Improvement.

**BUS 7003. Charlotte Aviation Customer Service. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

Designed to increase the skills and knowledge needed in challenging workplace situations that require excellent customer service. Presented with a mix of class discussion, activities and role play opportunities, this course will allow participants to identify the components of great customer service and how to incorporate those into every day work while also highlighting the need to take care of themselves with tips and best practices for keeping stress levels in check.

**BUS 7005. Statistical Analysis for Research Methodology. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

Using statistical analysis to better understand and present research methods for management analysts.

**BUS 7006. Identifying and Preventing Workplace Bullying. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

What is workplace bullying? What are the signs and symptoms of bullying perpetrators and victims? What can I do to prevent bullying before it happens? Join us for this two-hour class as we unravel workplace bullying as it relates to quid pro quo and hostile environment harassment. Watch and listen for the signs and symptoms as you work toward a harassment free environment. This course focuses on Anton Hout's ([www.overcomingbullying.org](http://www.overcomingbullying.org)) eight bully types: the screaming mimi, the two-headed snake, the constant critic, the gatekeeper, the attention seeker, the wannabe, the guru and the sociopath.

**BUS 7018. Getting Things Done- Managing Time. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This course will help participants evaluate personal styles of organization and time management preferences while suggesting practical techniques for application to make better use of time and space. Purchase book, "How to Make the Most of Your Workday," in the CPCC bookstore prior to attending the first class.

**BUS 7026. Hogan Assessments Team Workshop. 0.0 Hours.**

Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

Hogan Development Survey evaluates forms of interpersonal behavior that can cause problems at work and in life. Behaviors associated with elevated scores can be strengths, but when overused can derail relationships and careers. Individuals who understand their performance limitations have more successful careers.

**BUS 7116. Notary Public I. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This required course is a full introduction to the statutes that regulate the acts of NC notaries. The purpose is for applicants to become qualified candidates for the Notary Public commission. Successful candidates must meet a minimum 80 percent exam score. Review textbook prior to start of class.

**BUS 7117. Electronic Notary Certification. 0.0 Hours.** Class-440.0.

Clinical-0.0. Lab-0.0. Work-0.0

Participants must hold a valid commission as a notary public in NC order to qualify for this certification. This course instructs individuals in procedures required to exercise electronic notarial acts as set forth by the NC Secretary of State. The course will cover the NC Electronic Notary Act and electronic notary processes.

**BUS 7200. How to Plan and Book Meetings and Seminars. 0.0 Hours.**

Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This course will teach Administrative Professionals to plan and book meetings outside their workplace with greater confidence and the expertise of a seasoned meeting planner. Students will be taught meeting planning techniques including site selection, lodging arrangements, credit and billing procedures, meal selection and room set up. Participants will also gain insight into the perils and pitfalls that can await an unprepared meeting planner.

**BUS 7301. Executive Overview Workshop for Implementing Lean Six Sigma. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

Customized workshop will be designed to help the clients' leadership team gain a basic understanding of the Lean and Six Sigma methodologies, explore case studies from different industries and learn what it takes to get started with a Lean or Six Sigma deployment.

**BUS 7305. Improving Communication through Listening and Speaking. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This one-day course is designed to provide the communication tools to assist participants in establishing and maintaining successful personal and professional relationships by building communication skills through listening and speaking. Discussion points will include the importance and perception of the communication based on the communicator's body language and other non-verbal cues, how to make your office more customer friendly, how to become more effective communicator, and much more.

**BUS 7307. Basic, Basic Telephone Skills. 0.0 Hours.** Class-440.0.

Clinical-0.0. Lab-0.0. Work-0.0

The single greatest way to a company can distinguish itself from its competition is by the level of service it offers and the higher the level of service your organization offers, the more successful it will be. This module will give the learner basic knowledge of telephone etiquette and how to appropriately answer the telephone for a business.

**BUS 7308. Professional Telephone Techniques. 0.0 Hours.**

Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

Develop courteous and efficient customer service through professional telephone techniques in just 3 hours. Materials included.

**BUS 7311. Service Mentality. 0.0 Hours.** Class-440.0. Clinical-0.0.

Lab-0.0. Work-0.0

The single greatest way a company can distinguish itself from its competition is by the level of service it offers and the higher the level of service your organization offers, the more successful it will be. This module will give the learner basic knowledge of customer service and how to understand a service mentality.

**BUS 7314. Presentation Success. 0.0 Hours.** Class-440.0. Clinical-0.0.

Lab-0.0. Work-0.0

This beginning level course will help participants gain confidence in their public speaking ability. Participants will plan, develop and deliver short presentation during class. Each presenter will receive feedback from the instructor and students regarding presentation style, content organization, length, and other topics discussed in class (if applicable). Materials included.

**BUS 7315. Assertiveness Without Fear. 0.0 Hours.** Class-440.0.

Clinical-0.0. Lab-0.0. Work-0.0

Learn the skills to become more assertive in both personal and professional life in just one day. Purchase the book, "Assertiveness Skills," in the CPCC bookstore prior to attending the first class.

**BUS 7318. Dealing With Conflict and Negotiation. 0.0 Hours.**

Class-10.0. Clinical-0.0. Lab-0.0. Work-0.0

Join us for this action packed day class on managing conflict. You will learn some positive facts about conflict along with a discussion on how habits are formed. Time will be spent examining and practicing negotiation skills along with 5 ways to manage conflict. Participants will identify basic needs and how they relate to the subject of the conflict resolution. Tips on becoming better managers will be shared along with an analysis of effective communication skills. Attending this day session will result in your being a more effective manager of conflict situations in the workplace and in other life settings. Materials included.

**BUS 7319. Dealing with Difficult People. 0.0 Hours.** Class-440.0.

Clinical-0.0. Lab-0.0. Work-0.0

This one-day course is designed to provide tools in dealing with difficult people such as learning what triggers certain behaviors, taking ownership of your own behavior, choosing how to respond, and much more. Dealing with Difficult People is intended to help you assess your behaviors, particularly those displayed during conflict. Examine some strategies for putting yourself in charge, instead of letting someone else's emotions control you and your reactions. One of the objectives is to assist you in becoming a better manager of your day-to-day relationships both at work and at home.

**BUS 7321. Handling Change & Negativity in our Day To Day World.**

**0.0 Hours.** Class-10.0. Clinical-0.0. Lab-0.0. Work-0.0

This one-day workshop will focus on the change process. Beginning with a range of beliefs about change, participants will have the opportunity to examine their perception of change. Time will be spent studying the components of managing the change process. Attendees will review changes occurring in the workplace and their role in identifying the components that are working for or against change. In addition, personal goals related to the change process will be examined. Assumptions about change and key concepts from Spencer Johnson's book, "Who Moved My Cheese", will be reviewed. Attendees will be better able to understand the change process and apply their learning to changes in their personal and professional lives. Purchase the book, "Who Moved My Cheese", at CPCC bookstore.



**BUS 7322. Keeping Positive in a Negative World. 0.0 Hours.**

Class-10.0. Clinical-0.0. Lab-0.0. Work-0.0

During this one-day workshop, attendees will have the opportunity to examine the affects of negativity in their lives. Negative energy producers will be discussed, along with the physical and psychological impacts of negativity. Negativity in the workplace and in one's personal life will be analyzed. Ideas will be presented on how to cope with this force which drains us at work and in our personal relationships. Participants will leave with the necessary skills in dealing with negative types and how to prevent us from getting consumed by the negativity.

**BUS 7328. Managing Projects for Results. 0.0 Hours. Class-440.0.**

Clinical-0.0. Lab-0.0. Work-0.0

Learn strategies to manage projects effectively in just one day. Materials included.

**BUS 7332. Innovation Skills. 0.0 Hours. Class-440.0. Clinical-0.0.**

Lab-0.0. Work-0.0

Provides a practical approach to leaders and their teams to think differently about how they work. Learn to help generate new ideas that add value to your organizations and customers. Work together to advocate for the innovation and ensure that valuable new ideas are not lost.

**BUS 7334. Communication Skills. 0.0 Hours. Class-440.0. Clinical-0.0.**

Lab-0.0. Work-0.0

This course provides individuals with tools and techniques to communicate more effectively with co-workers and customers to help build relationships.

**BUS 7340. Business Etiquette. 0.0 Hours. Class-42.0. Clinical-0.0.**

Lab-0.0. Work-0.0

This course identifies types of etiquette, its importance in relation to confidence and credibility, corporate culture, meetings, introductions, and other types of formal and informal business situations.

**BUS 7344. MBTI Workshop Understanding Personality Types. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0**

The workshop utilizes the Meyers Briggs Type Indicator to interpret the results for better self-understanding in personal and professional life. The results from the assessments will be discussed in the workshop to better understand different personality types in the workplace.

**BUS 7348. Teambuilding with Myers Briggs. 0.0 Hours. Class-440.0.**

Clinical-0.0. Lab-0.0. Work-0.0

The workshop utilizes the Meyers Briggs Type Indicator to interpret the results for better self-understanding in personal and professional life. The results from the assessments will be incorporated in the teambuilding workshop to help build better working relationships.

**BUS 7349. Siemens Diversity. 0.0 Hours. Class-440.0. Clinical-0.0.**

Lab-0.0. Work-0.0

This course is designed to help participants engage in continuous awareness and evaluation of one's own values and experiences as they affect perceptions of others. Look beyond our obvious differences (culture, status, ethnicity, disability), to cultivate and enhance positive working relationships: \*Seeking to understand others' viewpoints, norms, and styles. \*Demonstrating and understanding of differences and similarities. \*Recognizing and addressing culturally biased behaviors to resolve conflict, solve problems and increase individual, team, and organizational performance.

**BUS 7352. Strength Finder Team Building. 0.0 Hours. Class-440.0.**

Clinical-0.0. Lab-0.0. Work-0.0

All people have a unique combination of talents, knowledge, and skills -- strengths -- that they use in their daily lives to do their work, achieve their goals, and interact with others. Gallup has found that when people understand and apply their strengths, the effect on their lives and work is transformational. People who use their strengths every day are six times more likely to be engaged in their work and three times more likely to say they have an excellent quality of life.

**BUS 7355. MBTI Assessment Feedback for Supervisors. 0.0 Hours.**

Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

The workshop utilizes the Meyers Briggs Type Indicator for supervisors to better understand their team and work environment.

**BUS 7356. Being Your Best (emotional intelligence). 0.0 Hours.**

Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

The ability to express and control our own emotions is important, but so is our ability to understand, interpret, and respond to the emotions of others. Learn more about what emotional intelligence is and how it works.

**BUS 7358. Effective Customer Service. 0.0 Hours. Class-440.0.**

Clinical-0.0. Lab-0.0. Work-0.0

Help employees communicate more effectively with customers through two way communication, determining what is being requested from them and how to handle themselves under pressure.

**BUS 7359. Understanding and Accepting Others. 0.0 Hours.**

Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

Participants should understand diversity, their reality regarding diversity and be able to successfully interact with others in a diverse workforce.

**BUS 7360. Replacing Body Language in an E-mail World. 0.0 Hours.**

Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

E-mail, Facebook, Twitter, LinkedIn is this the way we communicate? 55% of communication is body language, 35% is tone of voice, and only 10% of communication is done with words. How to deal in an email and text world giving up on two forms of the way we communicate. Learn how to communicate in a multicultural and diverse workplace.

**BUS 7365. Are You Running Your Life? Or Is Your Life Running You?. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0**

Understand time and how to best optimize its use. Learn how to analyze your use of time and cover your distractions and interruptions and learn how to manage them. Introduction to delegation as a tool to clear time from your busy schedule. Why do people procrastinate? Answer: They don't have a system. Participants will leave the class with a very detailed action plan to improve their use of time both in the workplace and at home.

**BUS 7366. Desk Top Pit Stop Critical Thinking Skills. 0.0 Hours.**

Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

Participants participate in a desk top pit stop challenge to learn and apply key concepts required to think critically. Along the way they apply it to their roles and leave with an action plan to put in place after the workshop.

**BUS 7370. Mathematical Models for Process Improvement. 0.0 Hours.**

Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This training is designed to give participants a review of basics, such as simple calculations and rounding in preparation for specific instruction in percentages to allow them to calculate percent, ratio, formulas, statistics, and control charts.

**BUS 7374. Intro to Leadership. Setting the Stage. 0.0 Hours.**

Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

The workshop is designed to prepare students for the upcoming leadership courses. The workshop will be interactive and fun with the goal of helping participants know what to expect from the leadership series.

**BUS 7375. Leadership in the Workplace. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

Students will learn to understand their own personal behavioral styles as well as their leadership styles and how these two styles influence how they lead and what areas of leadership should be improved. Students will also use this learning to deflect potential conflict and resolve existing conflict in a multi-cultural work environment.

**BUS 7380. Mentor Training - Train the Trainer. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

Operations trainers have the responsibility of ensuring that their trainees learn all the required steps and details of the tasks being trained so that they can meet the safety, quality and efficiency requirements of the job. Trainers/mentors must be able to communicate the information effectively and verify that the trainees have understood and internalized what they have learned and can demonstrate ability to perform the trained tasks. Mentors must also act as leaders and role models in training, communicating and demonstrating critical behaviors and attitudes. This course provides training and practice in tools and methods to drive consistency of training methodology and to elevate performance as a trainer/leader.

**BUS 7385. Intercultural Awareness Training. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

Increase the level of knowledge and understanding of the similarities and difference involved in working with individuals from a different country of origin. Communicating and working with other cultures.

**BUS 7400. Making the Transition to Management. 0.0 Hours.**

Class-50.0. Clinical-0.0. Lab-0.0. Work-0.0

This course is designed to meet universal needs of new supervisors making the transition to management. Topics addressed will include the role of the manager, understanding basic needs of employees, setting expectations with employees, providing recognition and feedback, and making the shift from "doing" to "managing." Purchase book, "Managers as Mentors," in the CPCC bookstore prior to attending the first class."

**BUS 7410. Branding, Marketing for Not for Profit & Association Mgmt. 0.0 Hours.** Class-20.0. Clinical-0.0. Lab-0.0. Work-0.0

This 10-hour course is designed for individuals from non-profits and associations. Participants will have a better understanding of: "Positioning & Branding": what it means for your organization, how to strategically plan for your organization around it's purpose, and how to treat your organization like a business for maximum results.

**BUS 7411. Process Management. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This blended 21-hour course requires 12 hours in class and nine hours of individual online activity (out of class) and is designed to help participants develop a road map that will enable process owners and teams to identify, define, manage and improve their business processes. The class will address both current and new processes and participants will learn how to ensure they meet business performance objectives.

**BUS 7412. Balancing the Mission and Financial Requirements of Your Organization. 0.0 Hours.** Class-20.0. Clinical-0.0. Lab-0.0. Work-0.0

This course will provide participants with a basic understanding of the importance of linking the mission of not-for-profit organizations with the financial budget in order to ensure the organization is mission-driven with appropriate financial disciplines. The course is designed to give participants practical tools for budget/ financial management.

**BUS 7413. Developing an Effective Not-For-Profit Business Plan. 0.0 Hours.** Class-20.0. Clinical-0.0. Lab-0.0. Work-0.0

This course will provide participants of not-for-profit organizations with the tools necessary to develop an effective business plan. Each participant will develop his/her own business plan in class.

**BUS 7414. Partnering & Collaboration. 0.0 Hours.** Class-20.0.

Clinical-0.0. Lab-0.0. Work-0.0

Partnering and collaboration is essential for survival in a not-for-profit organization. Participants will learn how to obtain funds and sponsorships, write grants, partner with other agencies, conduct a program evaluation and more.

**BUS 7416. Tapping Your Board's Potential. 0.0 Hours.** Class-20.0.

Clinical-0.0. Lab-0.0. Work-0.0

This course is designed to help participants understand board and staff roles and responsibilities, policy development, succession planning, how to make board and committee meetings work, new board orientation and more.

**BUS 7425. Process Mapping. 0.0 Hours.** Class-440.0. Clinical-0.0.

Lab-0.0. Work-0.0

Learn to use process mapping to help you document and analyze processes. Process maps provide an overview of the process and can help improve team communications while also serving as a reference document. They can provide a high level view of the flow of a process with major processes identified or can get into sub-processes to show hand-offs between people, organizations and systems. Process maps facilitate process planning and process changes by identifying inter-relationships and aiding troubleshooting.

**BUS 7430. Lean Six Sigma Green Belt Certification. 0.0 Hours.**

Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

Become Green Belt Certified and have the skills to lead Lean Six Sigma project teams. Work with cross-functional teams to define and measure problems, analyze root causes, implement improvements, and establish control. Course is comprised of two components, online learning and classroom education. Lean Six Sigma project is required to demonstrate the methodology acquired from the course.

**BUS 7432. Lean Six Sigma Basics Awareness (white Belt). 0.0 Hours.**

Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This one-day class gives an overall view of the Six Sigma DMAIC/L process improvement methodology. DMAIC/L is an acronym that stands for Define, Measure, Analyze, Improve, Control, and Leverage. The history, concepts, vocabulary, and many acronyms of Six Sigma are first presented in an easy to understand manner to allow students to "Talk the Talk" of the Six Sigma world. The DMAIC/L tools and methods are then taught in a hands-on manner to begin the "Walk the Talk" using students' examples for implementation of a Six Sigma project.

**BUS 7435. Lean Six Sigma Black Belt Certification. 0.0 Hours.**

Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

Prepare to provide an organization with the expertise of a certified Lean Six Sigma Black Belt. Course content is built on the American Society for Quality's Body of Knowledge and can assist students in preparing for ASQ certification exam. Black belts lead cross-functional teams to carry out improvement projects, implement tools of Six Sigma and provide statistical expertise for project teams.

**BUS 7436. Lean Six Sigma Executive Overview Course. 0.0 Hours.**

Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

After successful completion of this course, participants will have an understanding of the Lean Six Sigma methodology. Participants will understand how Lean Six Sigma projects are selected, measured and monitored to ensure successful completion within an organization.

**BUS 7438. Celgard Six Sigma Yellow Belt. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This class introduces some of the basic concepts of Lean Six Sigma. Using online modules, participants will learn tools that will help them identify waste, understand basic statistical concepts, assess process capability, interpret and use control charts, and organize and present data. This course is not intended to develop subject matter experts.

**BUS 7439. Celgard Six Sigma Black Belt. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This class introduces concepts, tools, and methodologies that are common to Lean Six Sigma black belt practitioners. By completing online modules, participants will learn skills that can be applied to many areas including project management, problem solving, error proofing, statistical analysis, process control, variability reduction, process mapping, workplace simplification, identification and elimination of waste, rapid changeover, and work flow, layout and design. Note: The subject matter covered in this course is useful in preparing for ASQ certifications such as Lean Six Sigma Black Belt. However, additional self-study combined with practical application is recommended.

**BUS 7440. Mini-tab Introduction. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

Students will learn how to navigate the various windows, toolbars, and customization features used in Mini-tab to increase their efficiency in performing basic exploratory data analysis. Learn how to import various types of data (Excel, text, etc.), export data and output between MINITAB and various software packages, and how to create, manipulate, and restructure data for specific tasks.

**BUS 7445. Lean Six Sigma Yellow Belt. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

Lean Six Sigma professionals are very much in demand for continuous process improvements initiatives in all organizations. This course is a blend of ~6 hours of on-line training and 12 hours of classroom instructions spread out over 4 weeks. As Lean Six Sigma tools are learned they will be applied to students' work examples and classroom simulations. Yellow Belt certification requirements include active classroom attendance/participation, passing all on-line modules' post-tests, and a final exam.

**BUS 7450. SPC 1: Process Monitoring Using Control Charts. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This course is designed for people who need to have a knowledge and understanding of statistical process control (SPC). Students will learn how to interpret and use control charts to monitor a process for stability. Students will learn about the different types of data and which control chart is the appropriate type of chart to use for a specific situation. Students will be taught how to create and analyze control charts using a statistical software package, Mini-tab.

**BUS 7460. Failure Mode and Effects Analysis and Control Plans. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

A basic overview of potential failure mode and effects analysis (FMEA) and the relationship of FMEA to Control Plans. The relationship of FMEA and Control Plans to QS-9000 Quality Management System and related AIAG requirements such as APQP and PPAP will be explained.

**BUS 7465. APQP & PPAP for Quality. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

The purpose of this course is to provide current and new members of APQP (Core) Teams with the essential awareness, knowledge, understanding, appreciation and skills to perform Advanced Product Quality Planning and the preparation of Control Plans. This course is based on the AIAG APQP/CP reference manual. Participants should have an understanding of ISO/TS 16949:2009 and applicable Automotive Customer requirements and have a working knowledge of control plans. The course also provide employees responsible for PPAP with the essential awareness, knowledge, understanding, appreciation and skills to develop and submit production part approval process documents that meet customer submittal requirements. The course is based on the AIAG PPAP reference manual.

**BUS 7500. The Rainmaker School of Professional Sales Development. 0.0 Hours.** Class-90.0. Clinical-0.0. Lab-0.0. Work-0.0

This 24-hour course is offered in partnership with national sales trainer, Landy Chase. In only 6 class sessions, participants can improve their personal selling skills for life. Topics include: selling value vs. selling price, competitive selling strategies, business development skills, dynamic presentation skills, managing meetings effectively, client-focused closing skills, and more! Materials included.

**BUS 7511. Business to Business Sales 101. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

Business to Business Sales 101 teaches participants to use a repeatable process based on best sales practices that takes them through the sales cycle from initial contact to closing the sale.

**BUS 7512. Essential Skills for Sales Success. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

Sales is a deliberate process, and Essential Skills for Sales Success leads participants through a comprehensive study of the essentials of sales success. From identifying unique buying behaviors, to prospecting, needs assessment, presenting solutions, and closing, participants learn the skills necessary to achieve success in today's fast-paced selling environment.

**BUS 7520. Client-Focused Closing Skills. 0.0 Hours.** Class-90.0. Clinical-0.0. Lab-0.0. Work-0.0

The closing process is composed of three separate, yet critical components: presenting pricing properly, handling final objections and concerns, and asking professionally for the business. Most sales people think they know to close properly. In reality, however, few really know what to do in response to statements such as "your price is too high" or "let us discuss it with our committee and we'll get back with you." And, truth be told, few sales people ever actually ask for the order - not because of an ability issue, but simply because they don't know how to. Landy takes all of these issues and, many others, head on in this practical, cutting-edge seminar.

**BUS 7522. Essentials of Professional Selling. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

In just one day of highly interactive professional sales training, you will develop and refine your selling skills. Over 50,000 sale professionals globally have enhanced their results by attending this powerful program. This is not another generic sales course; the class is a unique fact-based development program that identifies the sales top producers' best practices as revealed by their customers. Most importantly, during the class you will discover how to utilize these proven techniques to sell YOUR products/services to YOUR customers.

**BUS 7575. Designed Sales Strategies for Six Sigma. 0.0 Hours.**

Class-90.0. Clinical-0.0. Lab-0.0. Work-0.0

Designed Sales Strategies for Six Sigma (DSS-Six Sigma) is a sales strategy development training course. The course is designed to help managers design a common sales process that results in increased productivity in the sales organization. DSS-Six Sigma is designed to integrate the Six Sigma (DMAIC) components into a company's selling and marketing effort.

**BUS 7700. Zodiak, the Business of Manufacturing. 0.0 Hours.**

Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This 8-hour simulation developed by Paradigm Learning gets people to learn and use critical financial management and strategic decision-making skills in a creatively designed team exercise. Players run a fictional company on a game board and gain first-hand understanding of the big picture of how their organization makes money and answers to shareholders. They will see the factors - including their personal performance - that impact profitability. Importantly, they will have a chance to discuss applying the concepts in their own organizations. Zodiak is especially relevant in training non-financial people.

**BUS 7970. Telephone Doctor. 0.0 Hours.**

Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

Telephone Doctor Customer Service Training seeks on improving the way your organization communicates with your customers.

**BUS 7975. Challenge of Change. 0.0 Hours.**

Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

Change is inevitable personally and professionally. Learn tools on how to deal with change successfully.

**BUS 7976. Professional Workplace Boundaries. 0.0 Hours.**

Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

The Leadership and Professional Boundaries course is a participative workshop designed to increase the awareness and understanding of managers and supervisors of their key leadership role and responsibility in reinforcing company values and principles and maintaining a productive workplace for all employees. Case studies are used to review the responsibilities that managers and supervisors have in reinforcing the Standards of Conduct and Behavior and to increase awareness of the influence and impact that managers and supervisors have on people in their organization through their daily actions and words. The course emphasizes that respect and trust are main ingredients for a high quality workplace.

**BUS 7977. Empowering Employees. 0.0 Hours.**

Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

Have you ever walked out of a meeting or a one-on-one and thought, "I would have like to said this.." We are offering a workshop on Empowerment in the Workplace. Learn your preferred and natural style of communication utilizing an online assessment. Strengths. Challenges. Communicating with Confidence.

**BUS 8115. 7 Habits of Highly Effective People. 0.0 Hours.**

Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

**BUS 8116. Project Management Fundamentals. 0.0 Hours.**

Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This project management course is designed to provide the skills and experience needed to successfully manage projects from initiation to completion. The certification program highlights skill areas of: targeting end objectives, project staffing, the 9 skills of successful project management, project time management, project quality management, project accounting, advanced project management tools. The course will be delivered via instructor-led and computer-based training and includes exercises that allow students to practice the application of knowledge and skills learned during the course. Additionally, the course will include an introduction to Microsoft Project, which will familiarize students with project management software.

**BUS 8200. Project Countdown!. 0.0 Hours.**

Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

Project Countdown is an extremely realistic project management simulation in a "discovery" learning format. Each participant is an employee of company, called to work on a cross-functional project team, who will be analyzing information, making decisions and managing Countdown to a successful conclusion. The simulation is an intense "nine month" project, with information coming from voice mail, memos, e-mail, phone calls and from the project manager.

**BUS 8205. Business E-mail Etiquette. 0.0 Hours.**

Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

Do your emails make a professional impression? What do your business emails communicate about you and your message? Now is a good time to assess your email effectiveness and learn ways to make this online form of communication work better for you.

**BUS 8210. Be Your Own Editor. 0.0 Hours.**

Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

Have you ever asked yourself, "Did I get my point across in that e-mail? Did my report clearly communicate what we accomplished?" Good writing is a product of clear and logical thinking. The higher you go in an organization, the more your job requires the ability to write in an effective and professional manner. In order to gain credibility you must be able to write concisely yet allow your point of view to be communicated clearly. This workshop is designed to help you learn to craft well-written communication through self-editing techniques. Investing in your writing skills will have long-term payoff in your career.

**BUS 8220. Building Leadership Trust & Credibility. 0.0 Hours.**

Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This course interactively teaches the importance of trust and credibility in leadership within an organization and how it directly relates to optimal workplace production.

**BUS 8230. Working as a Team. 0.0 Hours.**

Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

Teamwork and Team Building workshop will encourage participants to explore the different aspects of a team, as well as ways that they can become a top-notch team performer. Your participants will be given the details and concepts of what makes up a team, and what factors into being a successful team and team member.



**BUS 8235. Develop Effective Working Relationships. 0.0 Hours.**

Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

Based on the book "The 5 Languages of Appreciation in the Workplace" applies the love language concept to the workplace. This book helps supervisors and employees effectively communicate appreciation and encouragement to each other, resulting in higher levels of job satisfaction, healthier relationships between managers and employees, and decreased cases of burnout. Each book contains an access code for the reader to take a comprehensive online MBA Inventory (Motivating by Appreciation). The results will be used in the workshop.

**BUS 8240. Five Behaviors of a Cohesive Team. 0.0 Hours.**

Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

Teamwork is a competitive advantage. In this course an intact team is introduced to the Five Behaviors of a Cohesive Team model developed by Patrick Lencioni. Through the team DiSC assessment, the team members learn about themselves, their own and team members' DiSC styles, and how the team rated itself on each of the five behaviors. The assessment also provided feedback on the team's strengths and challenges related to each cohesive behavior providing opportunities for focused action planning.

**BUS 8300. Essentials of Project Management. 0.0 Hours.**

Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This class will meet the Project Management deliverables of: initiating, planning, executing, controlling, and closing. Essentials of roles and responsibilities, tracking progress, communicating, scope, budget, resources, and schedule. This session will also include a project simulation and online work to enhance the elements of project management.

**BUS 8310. Time Management Workshop. 0.0 Hours.**

Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

Learn how to optimize your time on the job and complete projects on time. Understand how to prioritize tasks and activities to accomplish your goals.

**BUS 8311. Hand and Power Tool Safety Training. 0.0 Hours.**

Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

Upon completion of this course participants will be able to safely operate various tools including manual hand and stationary power versions. Students will also be able to determine which task each tool should be used for and how these tools will aid them in their job.

**BUS 8312. ARC Flash Electrical Safety. 0.0 Hours.**

Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

ARC Flash Electrical Safety introduces new users to the basics of electrical safety. Participants will learn how to avoid powered tool hazards and apply appropriate controls when working with electrical components.

**BUS 8315. Training: TDM System User. 0.0 Hours.**

Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This 2-day course builds on existing knowledge of the TDM System. For example, the course members learn how to structure and configure tool data into classes and groups. The target of this training course is to enable course members to configure and manage TDM on their own.

**BUS 8320. Challenging Conversations. 0.0 Hours.**

Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

Communicating honestly with a focus on desired results can be tough at times - particularly when you need to deliver a difficult message, give performance feedback, or confront challenging behavior. It's especially hard to deal with anger, silence, or tension. However, navigating your way through these situations is key to being able to resolve conflict and promote creative problem solving.

**BUS 8400. Technical Writing. 0.0 Hours.**

Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

Upon completion of the learning modules, students in the training will have an understanding and application knowledge of how to write effective instructions, utilize correct sequence and order in instructional tools, and incorporate graphics for visual effect and assistance within a technical document.

**BUS 8501. Managing Customer Service. 0.0 Hours.**

Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

Discover the methods for bringing out the best in your team, measuring customer service, and learning what you need to do to anticipate the needs of your reps and your customers. Unlock the power of leading by example and setting new trends for customer service in your growing business.

**BUS 8502. Leadership. 0.0 Hours.**

Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

Leadership skills can help you gain the respect and admiration of others, while also allowing you to enjoy success in your career. Contrary to popular belief, leadership skills can be learned and developed. Even if you don't hold a leadership position, this course will teach you how to use the principles of great leaders to achieve success in almost every aspect of your daily life. Offered in partnership with ed2go.

**BUS 8503. Achieving Success with Difficult People. 0.0 Hours.**

Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

Learn how to have more successful relationships with difficult bosses, co-workers, students, neighbors and family members. This class will help you with understanding yourself, solving people problems, and improving your relationships and personal and professional productivity. Offered in partnership with ed2go.

**BUS 8551. Resume Writing Workshop. 0.0 Hours.**

Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

Create an effective resume or improve the one you already have. Transform your resume into a powerful tool that will get you interviews. Learn different resume formats and the advantages and disadvantages of each.

**BUS 8600. Anatomy of a Team Leader. 0.0 Hours.**

Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

Are you a new people leader or soon to become one? Ease the transition from teammate to people leader and its associated anxieties by learning about yourself and others, as well as practicing personal communication techniques, making sound business decisions, employing effective business strategies, and driving team and corporate change. Lead, coach, set goals, review results and execute strategy confidently from your first day at the helm of your team. Experience, simulate and practice your new skills with other emerging leaders in the classroom -- before you grab the wheel!

**BUS 8700. Keys to Effective Communication. 0.0 Hours.**

Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

Become a great conversationalist by learning to use communication to build rapport and create environments of trust, warmth, and respect. Become more confident, create a great first impression, get along well with others, and create more and better personal and professional relationships.

**BUS 8701. Mastering Public Speaking. 0.0 Hours.**

Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

Discover how to talk confidently and persuasively to both large audiences and small groups. Learn how to plan and deliver your presentations skillfully and how to manage one of the most common public speaking barriers-fear.

**BUS 8710. Train the Trainer Tool Box Session. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

Short training sessions to train and refresh supervisors to develop a consistent method of how to share information with employees. An overview and pointers on how to present. Training would be applicable for all shop employees. Learn how to be most effective and consistent when they deliver information.

**BUS 8981. Writing Effective Investigations. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

In this course, you will assess your current technical writing skills and learn specific techniques to improve your style. Emphasis is on organization and appropriate choice of language, primarily for investigations. Content also applies to regulatory documents, email, memos, SOPs, batch records and other technical communications.

**BUS 8982. Working Together Works. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

Working together is the key way to help your teams, your organization, and yourself become more successful. Becoming an effective supervisor is predicated on alignment, building partnerships and empowering teams. An effective supervisor knows how to resolve conflicts, develop teams, and provide feedback on a continuous basis. Working Together Works! provides supervisors with the techniques, tactics and skills needed to develop each of these key skills and more.

## Carpentry (CAR)

**CAR 7000. Carpentry I, Part I. 0.0 Hours.** Class-120.0. Clinical-0.0. Lab-0.0. Work-0.0

This course is an introduction to the carpentry trade for apprentices and others wanting to enter the trade. Topics covered include construction math, safety, blueprint reading, use of basic hand and power tools, and an introduction to framing methods.

**CAR 7001. Carpentry I, Part II. 0.0 Hours.** Class-400.0. Clinical-0.0. Lab-0.0. Work-0.0

This course is a general introduction to construction carpentry utilizing the wheels of learning curriculum. Topics covered include an orientation to the trade; nails, fasteners, and adhesives, woodbuilding materials; and the fabrication of floor, wall, and roof systems.

**CAR 7030. Drywall Installation Procedures. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This course introduces the methods, materials, tools, and techniques necessary to correctly install drywall covering.

**CAR 7031. Drywall Finishing Procedures. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This course is the sequel to drywall installation procedures. It covers the materials, tools, methods and techniques necessary to finish the surfaces of installed drywall in preparation for painting.

**CAR 7040. Qualified Framer. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

Want to learn the skilled craft of carpentry? The Qualified Framer Class allows candidates to learn carpentry and framing skills in short term with this competency and worksite based program. Through cooperation with the local construction industry students are taught the construction fundamentals cluster (CIX 7005) as well as floor, wall, ceiling, & simple roof framing techniques on live work site labs (70%) and in the classroom (30%). Competency testing is required for area certification & will be both written and practical. Additional advanced carpentry certification may be attempted depending on schedule and student. Upon completion, graduates can use our Career Center registry of licensed local contractors and employers who have listed jobs for trained and certified graduates.

**CAR 7041. Residential Framing II. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

**CAR 7101. Home Construction Methods and Details. 0.0 Hours.** Class-120.0. Clinical-0.0. Lab-0.0. Work-0.0

A course designed to assist the inexperienced builder to identify and evaluate information and procedures pertaining to home construction such as lot surveys, drainage, excavation and foundation construction, foundation wall, floor, wall and roof framing; appraising prefabricated walls and roof trusses, various types of duct work, heating and plumbing rough-in and electrical wiring; comparing and selecting exterior wall coverings, plumbing-lighting-electrical fixtures and devices and hardware; and evaluating the application of the construction materials and techniques.

**CAR 7130. Residential Contractor's Exam Review. 0.0 Hours.** Class-66.0. Clinical-0.0. Lab-0.0. Work-0.0

This course is a review of the laws, codes and procedures covered by the General Contractor's License Examination for residential and light construction. This classification includes construction of all one and two-family dwellings covered by the N.C. Residential Code.

**CAR 7131. Commercial Contractor's Exam Review. 0.0 Hours.** Class-66.0. Clinical-0.0. Lab-0.0. Work-0.0

This course is a review of the laws, codes and procedures covered by the General Contractor's License Examination for commercial construction. This classification includes the construction of all commercial, industrial, individual, multi-family and residential construction. The financial requirements for the Commercial/Building classification are the same for the Residential classification.

**CAR 8131. Commercial Contractor's Exam Review. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This course is a review of the laws, codes and procedures covered by the General Contractor's License Examination for commercial construction. This classification includes the construction of all commercial, industrial, individual, multi-family and residential construction. The financial requirements for the Commercial/Building classification are the same for the Residential classification.

## Cosmetology (COS)

### **COS 7001. Interactive Teaching for Cosmetology Instructors. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This course is designed specifically for licensed cosmetic art instructors. At the end of this lesson, the attendee will have an understanding of interactive activities to engage students, develop teaching skills to retain students, and provide activities for students to stay motivated throughout their cosmetology education. In addition, this class will learn to blend technology with teaching. The attendee will be provided updated information on the state board rules and regulations to maintain student passing scores.

### **COS 7002. Mathematical Solutions for the Beauty Industry. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This class is designed for licensed Cosmetologists in North Carolina. At the end of this lesson, the attendee will have an understanding of the basic mathematical functions used in the beauty industry. The attendee will learn to recognize the four mathematical operations and their relevance in day to day operations. In addition, the attendee will know how to incorporate these mathematical solutions to problem-solving in their career in the beauty industry. In this class, attendees will learn how to schedule clients and the importance of appointment planning. Attendees will learn proper techniques to controlling inventory and management. The importance of pricing products to determine profit margins will be discussed in this class. In addition, this class will cover topics such as budgeting and reporting in the beauty industry.

### **COS 7003. Sculpture, A Designer's Approach. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

The purpose for this educational session is to help participants learn to see and think about the shapes and forms of a sculpture and then practice creating sculptures using a step-by-step sculpting procedure and specialized sculpting techniques.

### **COS 7004. Natural Hair Care Certification, Part 1. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This is the first of two courses toward preparation for the Natural Hair Care Braiding License Exam. This course covers beginner level general sciences and practices specific to infection control, sanitation, bacteriology, first aid, shampooing, draping, anatomy, disorders of the hair and scalp, and client consultation.

### **COS 7005. Natural Hair Care Certification, Part 2. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This is the second of two courses towards preparation for the Natural Hair Care Braiding License Exam. This course covers advanced level applications specific to styles and techniques of natural hair styling, including twisting, wrapping, extending, locking, blow drying and hot ironing; business management and professional ethics; and other related topics.

### **COS 7006. Cosmetology Licensing Exam Prep. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This course is designed for licensing preparation specific to cosmetology graduates that need additional hours to sit for the NC Cosmetic Licensing Exam for Cosmetology. The coursework includes written and practical instruction in scientific concepts, hair care & services, skin care & services, and nail care & services. Students that are repeating the exam will be asked to bring their school report from previous exams in order to assess where the student was weak or strong in certain areas of the exam.

### **COS 7007. Natural Hair Care Basics Refresher. 0.0 Hours.**

Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This course is a refresher course that covers natural hair care practices for licensed stylists including natural hair care specialists, cosmetologists, and barber stylists. Topics and hands on training in professional transitioning from relaxed hair to natural hair texture. How to properly treat, detangle, and blow dry and manage natural hair. Product usage on natural hair. Establishing a healthy growth regimen of natural hair care styling and protective styles.

### **COS 7100. Introduction to Computers in Spanish. 0.0 Hours.**

Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

The Introduction to the Computer course is intended for students who have never used a computer or who have very little experience using the computer. This course will be offered in Spanish. This course will help students prepare for taking the GED test on the computer and give students the skills necessary to use the computer to assist them in future studies.

### **COS 8000. Cosmetology Educator Round Table Teaching Methodologies. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

Professional development designed to improve cosmetology education facilitation in the classroom and salon lab. Developing instructor/student relationship in their respective roles while training for licensure and cosmetology course completion.

### **COS 8001. Guidance for the Independent Contractor - the Business of Being a Booth Renter. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

Independent salon business operators will learn how to successfully launch a salon business by creating a brand. Students will learn planning and developing business practices that are aligned with industry standards. At the end of this class attendees will learn techniques to properly operate their independent beauty business.

## Culinary (CUL)

### **CUL 7300. Chef's in the Kitchen. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This course is for chef's currently working in a kitchen environment. Our certified culinary instructors will review cooking methods; assist with menu development for the client; equipment needed for menu development and plate presentation.

### **CUL 7500. Basics of Catering and Event Management. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

Plan. Organize. Execute. With this course on the basics of catering and event management, you will have the critical tools you need to plan, establish and manage a profitable catering business. Catering handbook required.

### **CUL 7600. Become a Professional Personal Chef. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

Turn your culinary skills into a business opportunity as you learn the basics of becoming a personal chef. This class will give you the skills you need to provide hungry customers with meals in the comfort of their own home. As you learn more about this growing industry, you will review meal planning, costing and proper techniques in preparation, handling and storage of food. Additionally, you'll learn tips for success in marketing and running a home-based business.

**CUL 8600. ServSafe Manager. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

The ServSafe program is the industry standard in food safety training and provides accurate, up-to-date information for every level of employee on all aspects of handling food, from receiving and storing to preparing and serving. Online exam will be administered at the end of class.

**CUL 8602. ServSafe Recertification Exam Only. 0.0 Hours.**

Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This ServSafe option purchases the two hour re-certification exam with a certified proctor. The class is for those currently working in the food industry that need to renew ServSafe certification. This class meets NC health code requirements.

**CUL 8604. ServSafe Recertification Review Course and Exam. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This class is for those currently working in the food industry that want to review changes to the health code requirements.

**CUL 8997. Capoeira de Angola. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This course will teach students technique and tradition in the training and performance of Capoeira de Angola, which include elements of African and Brazilian culture.

**CUL 8998. International Travel Information. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

Travel is recognized as one of life's most impactful learning experiences. International travel adds the dimension of experiencing foreign lands, cultures and new ways of doing things. Intercultural learning broadens our perspective towards the rest of the world and how we interact with it. The American image will change as we change our own attitudes and as our appreciation of others and their traditions expand. Our economy has become a global one; it is our responsibility to know our world in order to promote mutual understanding and to compete. Students will receive useful information to travel abroad.

**CUL 8999. Capoeira, a Brazilian Art Form. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

Capoeira is a fascinating Afro-Brazilian art form, which transcends the traditional disciplinary boundaries of dance, martial arts, music, and singing with cultural history, language and philosophy. More than simply a great stress-relieving workout and venue for social interaction, it is widely practiced for its application in everyday life; that of live presentation, reading situations, and improvisational problem solving or the ability to think on one's feet.

## Cyber Crime Technology (CCT)

**CCT 8240. ACE Prep Part 1. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This class is part 1 of the AccessData Certified Examiner (A.C.E) certification training.

**CCT 8241. ACE Prep Part 2. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This class is Part 2 of the A.C.E. certification training.

**CCT 8242. Accelerated ACE Prep. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

The Accelerated AccessData Certified Examiner class provides the knowledge and skills necessary to install, configure and effectively use FTK Imager, Forensic Toolkit, Password Recovery Toolkit, Registry Viewer. Participants will also use AccessData products to conduct forensic investigations on various systems and locate forensic artifacts. This course operates under a shorter time frame to allow a more expeditious complete of the ACE certification.

**CCT 8251. Internet Forensics 1. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

The CCT8251 course is intended to build on the knowledge acquired by students in the digital forensics program. Part 1 of this 3 part course focuses on the recovery of digital artifacts left behind during the use of common web browsers and other internet enabled applications. The course will teach students how to recover, interpret, and report internet evidence.

Prerequisites: Take CCT 240 or CCT 241

**CCT 8252. Internet Forensics 2. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

The CCT8252 course is intended to build on the knowledge acquired by students in the digital forensics program. Part 2 of this 3 part course focuses on the discovery and documentation of digital artifacts left behind during the use of today's popular internet enabled applications. The course will teach students how to recover, interpret, and report internet evidence.

Prerequisites: Take CCT 8251 with a minimum grade of S

**CCT 8253. Internet Forensics 3. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

The CCT8253 course is intended to build on the knowledge acquired by students in the digital forensics program. Part 3 of this 3 part course focuses on the discovery and documentation of digital artifacts left behind during the use of today's popular web browsers and internet enabled applications. The course will give students the ability to practice recovering, interpreting, and reporting of internet evidence.

Prerequisites: Take CCT 8252 with a minimum grade of S

**CCT 8261. Mobile Device Forensics 1. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

The CCT8261 course is part one of the Mobile Devices course series intended to build on the knowledge acquired by students throughout the digital forensics program. The series focuses on the discovery and documentation of digital artifacts from today's mobile devices. The course series will teach students how to recover, interpret, and report evidence.

**CCT 8262. Mobile Device Forensics 2. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

The CCT8262 course is part two of the Mobile Devices course series intended to build on the knowledge acquired by students throughout the digital forensics program. The series focuses on the discovery and documentation of digital artifacts from today's mobile devices. The course series will teach students how to recover, interpret, and report evidence.

**CCT 8263. Mobile Device Forensics 3. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

The CCT8263 course is part three of the Mobile Devices course series intended to build on the knowledge acquired by students throughout the digital forensics program. The series focuses on the discovery and documentation of digital artifacts from today's mobile devices. The course series will teach students how to recover, interpret, and report evidence.



**CCT 8271. Mac Forensics Module 1. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This course is the first of a three-part series of Macintosh forensics. This first module introduces the Apple Mac OS X user interface and operating/file system function. Topics include OS X interface basics such as using Finder, creating user accounts, using File Vault and installing/uninstalling applications. GPT disk structure and date and time acquisition will be covered along with the extensible firmware interface.

**CCT 8272. Mac Forensics Module 2. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This course is the second of a three-part series on Macintosh forensics. This second module introduces the steps taken to image a Mac from static to live Linux CD acquisitions. This module also covers finding evidence in the directory structure in addition to recovering user logon passwords. Specific Mac application artifacts will be covered from Safari, iChat and Apple Mail.

**CCT 8273. Mac Forensics Module 3. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This course is the third of a three-part series on Macintosh forensics. This final module ties together the knowledge obtained from the prior classes in a practical assessment.

**CCT 8274. Applied Decryption and Advanced Password Recovery I. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

The CCT8274 course is the first of a three part series of Applied Decryption and Advanced Password Recovery. This first module introduces the theory of applied decryption. Topics include the history of encryption, the complexity of algorithms, and advanced concepts such as hashing, salting, and encryption enhancing features. We will cover all of the basic and advanced password encryption and hashing algorithms as well as learn about the people responsible for developing them.

**CCT 8275. Applied Decryption and Advanced Password Recovery II. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

The CCT8275 course is the second of a three part series of Applied Decryption and Advanced Password Recovery. This module introduces the tools necessary in applied decryption. Topics include the difference between dictionary attacks, brute-force attacks, and rainbow tables. The use of advanced decryption tools such as PRTK, Passware, Aircrack, and SSLStrip.

**CCT 8276. Applied Decryption and Advanced Password Recovery III. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

The CCT8276 course is the third of a three part series of Applied Decryption and Advanced Password Recovery. This module combines the theory and the practical application of applied decryption. Topics include decrypting password hashes, decrypting salted password hashes, decrypting wireless encryption, and decrypting common network encryption.

**CCT 8277. Distributed Processing Module 1. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

Distributed Processing Module 1 is the first of a 3 part sequence that allows users to leverage the processing power of multiple computers to process and index massive volumes of digital evidence faster than any other solution available today. When analyzing digital evidence, investigators must process the captured data to break out compound files and index documents and email, so they can be searched effectively. Distributed Processing can leverage up to four processing workers, one on the local examiner computer and three distributed computers. This allows them process terabytes of computer evidence in a fraction of the time it would take normally.

**CCT 8278. Distributed Processing Module 2. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

Distributed Processing Module 2 is the second of a three part sequence that allows users to leverage the processing power of multiple computers to process and index massive volumes of digital evidence faster than any other solution available today. When analyzing digital evidence, investigators must process the captured data to break out compound files and index documents and email, so they can be searched effectively. Distributed Processing can leverage up to four processing workers, one on the local examiner computer and three distributed computers. This allows them process terabytes of computer evidence in a fraction of the time it would take normally.

**CCT 8279. Distributed Processing Module 3. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

Distributed Processing Module 3 is the third of a three part sequence that allows users to leverage the processing power of multiple computers to process and index massive volumes of digital evidence faster than any other solution available today. When analyzing digital evidence, investigators must process the captured data to break out compound files and index documents and email, so they can be searched effectively. Distributed Processing can leverage up to four processing workers, one on the local examiner computer and three distributed computers. This allows them process terabytes of computer evidence in a fraction of the time it would take normally.

**CCT 8280. Data Recovery Techniques. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

The accelerated CCT8280 course introduces the unique skills and methodologies necessary to assist in the investigation and prosecution of cyber crimes. Topics include hardware and software issues, recovering erased files, overcoming encryption, advanced imaging, transient data, internet issues and testimony considerations.

**CCT 8299. Combined Distributed Processing Module 1. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

Distributed Processing allows users to leverage the processing power of multiple computers to process and index massive volumes of digital evidence faster than any other solution available today. When analyzing digital evidence, investigators must process the captured data to break out compound files and index documents and email, so they can be searched effectively. Distributed Processing can leverage up to four processing workers, one on the local examiner computer and three distributed computers. This allows them to process terabytes of computer evidence in a fraction of the time it would take normally.

**CCT 8371. Registry Forensics 1. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

The CCT8371 course is the first of a three-part series on Windows Registry Forensics. This first module introduces the Windows Registry in various versions of Microsoft Windows systems. Topics include static and dynamic registry files, registry hives and structure and operating system specific implementations. Students will utilize registry specific tools to view registry files in the file system.

**CCT 8372. Registry Forensics 2. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

The CCT8372 course is the second of a three-part series on Windows Registry Forensics. This second module introduces specific evidentiary artifacts located in the Windows Registry and how to obtain registry files from a static or live acquisition. This module covers the artifacts located within the five key registry files of Window XP and subsequent Microsoft operating system as well as the two key registry files of the Windows 9x operating systems.

Prerequisites: Take CCT 8371 with a minimum grade of S

**CCT 8373. Registry Forensics 3. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

The CCT8373 course is the third of a three-part series on Windows Registry Forensics. This final module ties together the knowledge obtained from the prior classes in a practical assessment.

Prerequisites: Take CCT 8373 with a minimum grade of S

**CCT 8400. Access Data Forensics. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This course explores the installation, configuration and operational use of the Forensic Tool Kit 5.X software family. Upon completion of this course, the student should be able to competitively perform the Access Data Certified Professional examination. Suggested prior experience or training: Basic Digital Forensics Training and 1 year experience in a Digital Forensics environment. CompTIA A+ or equivalent computer hardware and software skills. Suggested prior coursework from CPCC: CTI-130 OS and Device foundations CCT-121 Computer Crime Investigations Class Contact Hours: 60 hours; 30 hours seated "in person" instruction and 30 hours online self-paced content. Course Text: Supplied by Division Title: Access Data Forensics; Academic Edition Training Manual.

**CCT 8410. Encase Digital Forensics. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This course explores the operational use of the Encase 8.xx software product. Upon completion of this course, the student should be able to competitively perform a basic forensics examination using Encase.

## Drafting (DFT)

**DFT 7010. Introduction to Basic Drafting. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This course introduces basic drafting techniques, lettering, use of architect's and engineer's and scales. Topics include line types, line weights, lettering and use of scales. Upon completion students should be able to prepare and print scaled drawings within minimum standards.

## Economics (ECO)

**ECO 8051. Introduction to Stock Options. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

Learn how to evaluate, buy, sell, and profit with investment tools that were once thought to be only for the pros. This course will teach you how to protect your portfolio and profit in a down market, an up market, or even a flat market. Learn to leverage your investment dollars for potential profits that surpass those possible with stocks.

**ECO 8052. Stocks, Bonds, and Investing: Oh My!. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

Join us for this online course in the basics of stocks, bonds, finance and investing. Learn about the stock markets, 401k plans and preparing for retirement to make your own investment decisions easier. You'll leave this course with a comprehensive and thorough education in personal finance and investment.

**ECO 8053. The Analysis and Valuation of Stocks. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This comprehensive course uses everyday language to provide you with conventional and advanced techniques in researching and valuing stocks. Learn to read financial statements and calculate financial ratios. Perform industrial comparisons, value stocks and conduct economic and industrial research.

**ECO 8054. Where Does All My Money Go?. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

Do you have trouble saving money? Do you wish you had financial security? Discover how to make conscious decisions about spending and saving. Find out where your money goes and learn how to make informed choices about where you want it to go. Learn how to fund your dreams and how to save money. If you have ever felt lost about where to start working on your finances, this course is for you. Offered in partnership with ed2go.

**ECO 8201. Let the Buyer Beware. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

If it sounds too good to be true, it usually is. This course is a must for savvy consumers. Learn how to protect yourself and your family from rip-offs, bogus deals, and other consumer headaches. This course will give - you - the buyer, the tools needed to make wise decisions in today's marketplace. Topics cover most major expenses, from buying a new car to buying a home, paying for college, or booking a cruise. Participants will receive a copy of the GSA Consumer Action Handbook.

**ECO 8202. Money Smart - Part I. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

Financial education fosters financial stability for individuals and for the entire community. The more you know about credit and banking services, the more likely you are to increase your savings, buy a home and improve your overall financial health and well-being. FDIC's Money Smart curriculum helps individuals build financial knowledge, develop financial confidence and use banking services effectively. Part I is an introduction to banking services, credit, checking accounts, budgeting and tracking your money effectively and the importance of savings. This course is a must for anyone who wants to establish sound financial practices. Materials are included in the cost of the course.

**ECO 8203. Money Smart - Part II. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

Financial education fosters financial stability for individuals and for the entire community. The more you know about credit and banking services, the more likely you are to increase your savings, buy a home, and improve your overall financial health and well-being. FDIC's Money Smart curriculum helps individuals build financial knowledge, develop financial confidence and use banking services effectively. Part II covers your rights as a consumer, how credit history affects credit future, credit cards, borrowing basics, and buying a home, perhaps the biggest investment of your life. This course is a must for anyone who wants to become financial savvy in today's world. Materials are included in the cost of the course.

**ECO 8204. Identity Theft: Prevention & Survival. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

Identity Theft claimed over 10 million victims last year. Law-enforcement authorities call it the fastest growing crime in our country today. For a criminal, identity theft is a relatively low-risk, high-reward endeavor. Consequently, most victims don't even know how it happened or who stole their financial information. Find out what steps you need to take to keep from becoming a statistic and what recourse you have if you are a victim. Arm yourself with knowledge and take control of your personal information.

**ECO 8205. Retirement Planning Today. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

You have many options for financing your retirement, but have you taken the time to plan how you will live during your retirement years? Without a clear plan, it is difficult to prepare financially for the next chapter of your life. Understand not only the traditional retirement plans, but explore the new view of retirement with additional opportunities and responsibilities. This course is appropriate for individuals just starting out in their careers, as well as those considering retirement.

**ECO 8206. Self-Help: Credit Repair Workshop. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

Credit plays an important role in our society. It is often misunderstood and misused, which can have a negative impact on our lives for many years. The purpose of this class is to provide a basic understanding of credit reports. Participants will learn about important credit legislation and the truth about credit counseling, debt management, and bankruptcy program. Participants will also learn the right way to correct and restore their credit.

**ECO 8207. Self-Help: Improving Your Credit Score. 0.0 Hours.**

Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

Credit scores are utilized by creditors, insurance companies, employers and even licensing agencies as a tool to determine a person's creditworthiness and character. Unfortunately, many people do not fully understand the importance of this three-digit number. This class will examine credit scores and their potential impact on someone's future. Participants will learn to improve and maintain good credit scores.

**ECO 8210. Understanding Credit and Credit Scores. 0.0 Hours.**

Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

Your credit score. It's just three numbers, but it dictates whether you'll get credit and what interest rate you will pay. Insurers use it to set premiums. Landlords use it to make renting decisions. Discover how credit and credit scores affect many aspects of your life.

**ECO 8211. Using Credit Wisely: Credit Cards, Personal Loans, Buying a House/Car. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0.

Work-0.0

Credit is a necessity in today's world, yet many consumers are not knowledgeable about using credit wisely. Misinformation or credit abuse may lead to financial stress including collections, judgments, foreclosure, and bankruptcy, which can all have a negative impact on one's financial future.

**ECO 8213. Financial Security: Insurance, Identity Theft, and Consumer Protection. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0.

Work-0.0

Risks are found in all aspects of daily living. This course will focus on three major areas that may affect our financial success. Many consumers do not fully understand insurance policies available for financial security. Participants will learn how to protect themselves from various financial risks.

**ECO 8244. Income Tax Preparation Workshop. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

It's that time of year again! Are you curious about credits or deductions you might be entitled to? This tax workshop is especially designed for individuals who wish to prepare their own income tax return. Participants will gain a better understanding of tax rules and become more organized with their personal income tax preparation. Taught by a CPA, the course covers the latest information and changes related to preparing your federal and state returns. Planning and time saving tips for future income tax preparation are also included.

## Education (EDU)

**EDU 7001. Substitute Training: Becoming an Effective Substitute Teacher. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This course prepares students for K-12 substitute teaching. Over three weeks, approximately 7 hours per week, students engage in online content and submit assignments on topics including working in a school setting, planning classroom management, and explaining instructional strategies. All assignments are submitted via Blackboard. For assistance with Blackboard contact CPCC ITS Support Desk at 704 330 5000 or visit a local CPCC campus.

**EDU 7002. Effective Teaching. 0.0 Hours.** Class-50.0. Clinical-0.0. Lab-0.0. Work-0.0

A training program to introduce information needed for teachers to increase their effectiveness with students.

**EDU 7017. Classroom Management Strategies. 0.0 Hours.**

Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This online course will acquaint the student with the concepts and methods of classroom organization, discipline strategies, and behavior management techniques. Practical applications will be provided for anyone intervening with students with discipline issues. A clear, systematic approach to guidance and discipline will be examined, while case studies and online personal reflections will provide a basis for implementation of the student's discipline plan.

**EDU 7018. Teaching the Learning Disabled Student In the Regular Classroom. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This course will acquaint the student with the history, characteristics, treatment and understanding of students classified as exceptional children. Practical applications will be provided for anyone teaching or interacting with exceptional children. Students will examine various classifications of exceptional children in detail ranging from students including, but not limited to, students with ADHD, learning disabilities, behavior disorders and gifted students.

**EDU 7021. Introduction to Attention Deficit Disorder. 0.0 Hours.**

Class-50.0. Clinical-0.0. Lab-0.0. Work-0.0

This course helps participants develop an understanding of attention deficit disorders (ADHD), how these affect class work and personal relationships as well as learning to adapt strategies for classroom use. Purchase materials in class. 2.0 CEU's.

**EDU 7033. Motivating Students. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

Based on current theories of motivation from the field of Educational Psychology, this course will discuss underachievers and uninterested students as well as key concepts of personal and external factors that influence a student's motivation to learn. Participants will develop practical classroom applications for individual learners at all grade levels.

**EDU 7034. Motivating Students Education. 0.0 Hours.** Class-50.0. Clinical-0.0. Lab-0.0. Work-0.0

Based on current theories of motivation from the field of educational psychology, this course will discuss underachievers and uninterested students as well as key concepts of personal and external factors that influence a student's motivation to learn. Participants will develop practical classroom applications for individual learners at all grade levels.

**EDU 7038. Learning Centers in the Classroom. 0.0 Hours.** Class-50.0. Clinical-0.0. Lab-0.0. Work-0.0

Explore a variety of uses for learning centers: as practice areas, for use with group activities, having student generated materials, reinforcement of content, as an extension of the curriculum. Procedures for setting up and running centers and evaluating student success at centers.

**EDU 7091. Teaching the Learning Disabled Student in the Regular Classroom. 0.0 Hours.** Class-50.0. Clinical-0.0. Lab-0.0. Work-0.0

This online course will introduce students to the history, characteristics, treatment and understanding of students classified as exceptional children. Practical applications will be provided for anyone teaching or interacting with exceptional children. Students will examine various classifications of exceptional children in detail including, but not limited to, students with ADHD, learning disabilities, behavior disorders and gifted students.

**EDU 7101. Stress Management. 0.0 Hours.** Class-50.0. Clinical-0.0. Lab-0.0. Work-0.0

Experience a multitude of ways to manage your stress. This two and one-half day class is filled with practical ways to handle the daily stresses of teaching and life. Purchase book in CPCC Bookstore prior to first class. 1.5 CEUs.

**EDU 7103. First Aid & CPR for Teachers. 0.0 Hours.** Class-50.0. Clinical-0.0. Lab-0.0. Work-0.0

New - Learn first aid and CPR for infants, child and adults using the American Red Cross First Aid Program. Purchase American Red Cross text and pocket mask prior to class. Card fee upon completion. 1.5 CEUs.

**EDU 7105. Introduction to the Gifted. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

Recommended for educators, specialists and parents. Designed to support regular classroom teachers and gifted teachers. Explore characteristics, behaviors, strategies and techniques every teacher can use to meet the academic needs of the gifted and talented. Purchase text prior to class, 2.0 CEUs.

**EDU 7109. Critical & Creative Thinking Skills. 0.0 Hours.** Class-50.0. Clinical-0.0. Lab-0.0. Work-0.0

This course will provide experiences in teaching and learning strategies for developing critical and creative thinking skills. Major models and strategies for thinking and questioning will be utilized for creating an active learning atmosphere. 1.5 CEU's.

**EDU 7110. Higher Level Thinking Skills Across the Curriculum. 0.0 Hours.** Class-50.0. Clinical-0.0. Lab-0.0. Work-0.0

This course will explore strategies which promote higher level thinking skills across the curriculum. Processes and application of problem solving, creative and critical thinking are emphasized. Purchase book in CPCC bookstore prior to first class. 1.5 CEU'S.

**EDU 7113. Curriculum Compacting. 0.0 Hours.** Class-50.0. Clinical-0.0. Lab-0.0. Work-0.0

This course will present the various roles of curriculum compacting in helping academically gifted students reach their potential. a variety of curriculum compacting styles will be examined with their application for meeting ag students, needs in both a "regular" classroom and ag resource pull-Out program.

**EDU 7115. Learning Styles and Unit Plans. 0.0 Hours.** Class-50.0. Clinical-0.0. Lab-0.0. Work-0.0

This course will provide a framework for developing integrated unit plans which incorporate student-centered learning, a variety of teaching models, all learning styles, and higher order thinking skills. Clear objectives, criterion referencing, integration of content areas and learning styles will be essential components. Purchase materials in class. 1.5 CEUs.

**EDU 7126. Introduction to Multiple Intelligences And Learning Styles. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

Using Multiple Intelligence, this course explores theory and classroom practices for understanding how students learn. Experience how to access and teach to individual student learning styles. Develop lessons, activities and assessment tools to reach and teach all students.

**EDU 7127. Differentiating Instruction for All Students. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This course is designed to provide participants with examples and strategies to use in today's increasingly diverse classrooms. Teachers will learn how to differentiate or structure lessons at every grade level and content area.

**EDU 7129. Dimensions of Learning. 0.0 Hours.** Class-50.0. Clinical-0.0. Lab-0.0. Work-0.0

Explore a learner centered approach to education. This course will explain how learning experiences can help students form positive attitudes about school, acquire and intergrate knowledge, and use knowledge meaningful. Purchase text in CPCC bookstore. 2.0 CEUs.

**EDU 7132. Issues and Trends in Gifted Education. 0.0 Hours.** Class-50.0. Clinical-0.0. Lab-0.0. Work-0.0

This course will focus on a discussion of current theories of intelligence and curriculum design for gifted learners. Current research by David Sternberg, David Coleman and others form the basis for seminar and discussion.

**EDU 7135. Alternative Assessments. 0.0 Hours.** Class-50.0. Clinical-0.0. Lab-0.0. Work-0.0

To introduce teachers to alternative methods of assessments other than traditional paper/pencil tests.

**EDU 7148. Accelerated Learning Using Quantum Teaching. 0.0 Hours.** Class-50.0. Clinical-0.0. Lab-0.0. Work-0.0

Learn how to orchestrate student success. Focus on how to facilitate learning artfully and purposefully, regardless of the subject matter. Purchase book in CPCC book store prior to first class. 1.5 CEU'S.

**EDU 7157. Discipline Strategies Necessary. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This workshop will focus on the management of conflict in the classroom. Various discipline models will be identified. Participants will leave with specific strategies to assist them in their day-to-day as professionals. 10 contact hours = 1 CEU.

**EDU 7163. MS Publisher for Educators. 0.0 Hours.** Class-50.0. Clinical-0.0. Lab-0.0. Work-0.0

Using MS Publisher students will create newsletters, flyers, brochures, banners and stationary. This comprehensive course covers various publisher tools: how to insert various forms of pictures and worksheets, and incorporate stylistic art forms and watermarks. Textbook is optional.



**EDU 7164. Microsoft Word for Teachers. 0.0 Hours.** Class-50.0. Clinical-0.0. Lab-0.0. Work-0.0

Microsoft Word for Teachers is an introductory class in which the student will be able to demonstrate a working knowledge of Word for Windows. The student will learn paragraph and document formatting as well as basic work processing techniques. Purchase text at the CPCC Bookstore prior to first class. 2.0 CEUs Prerequisite: EDU7198 (Windows 98) or equivalent experience with software applications using Windows.

**EDU 7167. Using the Internet to Strengthen Curriculum. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This course will introduce learners to the use of the Internet to develop lessons that will enhance curriculum and student learning.

**EDU 7169. Introduction to Excel. 0.0 Hours.** Class-50.0. Clinical-0.0. Lab-0.0. Work-0.0

(Windows 98) or equivalent experience with software applications using Windows. This entry level course is designed to introduce the student to the basics of operating Microsoft Excel. Students will use this application software program to create electronic spreadsheets, graphics, and databases. Purchase text at CPCC Bookstore prior to first class. 3.0 CEUs. Prerequisite: EDU7198(Intro to Windows 98).

**EDU 7173. Learning Access for Teachers. 0.0 Hours.** Class-50.0. Clinical-0.0. Lab-0.0. Work-0.0

Educators will explore possible classroom application of database software and students will learn to create tables and learn to design simple forms using Microsoft Access. 2.0 CEU's. Purchase required text in bookstore prior to first class. Prerequisite: Introduction to Windows and Microsoft Word.

**EDU 7187. Introduction to PowerPoint. 0.0 Hours.** Class-50.0. Clinical-0.0. Lab-0.0. Work-0.0

This course will introduce the capabilities of Microsoft PowerPoint as a powerful multimedia presentation software application. Participants will create, edit, format, save, and print presentations using Microsoft PowerPoint. Text is optional. 10 contact hours=1 CEU.

**EDU 7188. Creating Web Pages for Educators. 0.0 Hours.** Class-50.0. Clinical-0.0. Lab-0.0. Work-0.0

Join the educational community and create your own website to communicate with parents and peers. Under guided instruction you will develop Web pages using HTML and CSS that incorporate text, tables and images. Topic areas include developing structure and content, basic formatting using Cascading Style Sheets, navigation techniques, incorporating graphics and writing for the web. Instructor will provide all materials. 2.0 CEUs.

**EDU 7190. MS Office for Educators Office for Teachers. 0.0 Hours.** Class-50.0. Clinical-0.0. Lab-0.0. Work-0.0

For novice or advanced participants review and practice components of MS Office, Word, Excel, and PowerPoint. Textbook optional. 2.0 CEUs.

**EDU 7197. Integrating Technology Into the Classroom. 0.0 Hours.** Class-50.0. Clinical-0.0. Lab-0.0. Work-0.0

This class will explore practical and efficient ways to integrate technology resources and technology-based methods into everyday curriculum-specific practices. This class will present the fundamentals of computers and educational technology in an easy-to-understand format.

**EDU 7198. Windows for Teachers. 0.0 Hours.** Class-50.0. Clinical-0.0. Lab-0.0. Work-0.0

This course is designed for those with little or no prior PC experience. Personal computer user will discover the basics of computer technology utilizing the Windows 98 operating system. Purchase text in CPCC bookstore prior to first class. 2.0 CEUs No prerequisites.

**EDU 7202. Somewhere Between Workshops and Worksheets. 0.0 Hours.** Class-50.0. Clinical-0.0. Lab-0.0. Work-0.0

Discover creative ways to present curriculum using a variety of instructional strategies designed to maximize learning. 1.5 ceus.

**EDU 7205. Teaching Thinking Skills. 0.0 Hours.** Class-50.0. Clinical-0.0. Lab-0.0. Work-0.0

This course will introduce and practice the seminar approach to teaching with an emphasis on music to generate understanding and aid in retention. Teachers will participate in a process to create stimulating environments where they and their students can develop through reading, listening, speaking and writing. 3.0 CEU's.

**EDU 7208. Reading with Children's Literature. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This course will integrate children's literature into the elementary school curriculum. Students will examine author themes, styles and purpose.

**EDU 7210. Middle School Learner. 0.0 Hours.** Class-50.0. Clinical-0.0. Lab-0.0. Work-0.0

Explore the characteristics of the middle level learner with an emphasis on physical, psychological, and intellectual development. Analyze various strategies for meeting the unique learning needs of the middle school student and develop transferable teaching methods for use in middle school classrooms. This is a state approved Lateral Entry course. Purchase text prior to class, 3.0 CEUs.

**EDU 7212. Developing Real-Life Theme Based Units. 0.0 Hours.** Class-50.0. Clinical-0.0. Lab-0.0. Work-0.0

This course is designed for elementary teachers to develop integrated theme-based units using an umbrella-style plan. Units will include a focus on literature with integration of other subject areas of math, social studies, and science. 1.5 CEUs.

**EDU 7215. Literacy Strategies for Middle School. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This course explores the latest approaches to teaching, reading and writing to students in the middle grades. The course will present an overview of learning strategies needed by these students.

**EDU 7218. Vocabulary Strategies for Content Reading. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This online course will support regular classroom teachers, reading teachers and literacy facilitators. Participants will explore vocabulary strategies and techniques that every teacher can use to meet the academic needs of the students in their schools and classrooms. Teachers will use text as a guideline for online participation. 10 contact hours = 1 CEU.

**EDU 7222. Strategies for Block Scheduling. 0.0 Hours.** Class-50.0. Clinical-0.0. Lab-0.0. Work-0.0

New-Explore instructional strategies and effective activities for classrooms using Block Scheduling. Topics include Multiple Intelligence, Brain Research, Centers, Active Learning, Higher Level Thinking Skills and more. Experience activities and develop new ideas for use in your classroom.

**EDU 7223. Enriching Reading Through Creative Strategies. 0.0 Hours.**  
Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This course focuses on bringing creative strategies to teachers' daily literacy instruction. It presents ideas and techniques that can be used in the elementary classroom in order to enrich reading practices and stimulate a passion for reading among students. Strategies are meant to support and engage children while teaching them about the various genres of literature, decoding, fluency and comprehension strategies, as well as strengthening the connection between reading and writing. Specific techniques are presented that are helpful when encouraging struggling or reluctant readers and writers, and may be taken immediately back to the classroom to increase student success.

**EDU 7224. Strategies for Struggling Readers. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This course provides practical strategies in every content area for struggling readers in grades 3 through 5. The course will focus on strategies for comprehension skills and innovative ideas for decoding words.

**EDU 7227. Using Multiple Intelligences in Lesson Design. 0.0 Hours.**  
Class-50.0. Clinical-0.0. Lab-0.0. Work-0.0

This course will give participants an opportunity to plan lessons using the Multiple Intelligences. 1.5 CEUs.

**EDU 7229. Brain Compatible Teaching Strategies. 0.0 Hours.**  
Class-50.0. Clinical-0.0. Lab-0.0. Work-0.0

Explore and experience concepts on brain research to help engage students, stimulate their learning and keep them motivated. Learn teaching tips and strategies which support the ways students' brains work. Purchase text in CPCC Bookstore. 2.1 CEUs.

**EDU 7231. Discovering Your Educational Philosophy. 0.0 Hours.**  
Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This course will help educators understand and trace the issues, theories, and trends in the educational world. Teachers will discover their own personal educational philosophies and realize how those philosophies have been influenced by historical and modern theories. Learn how personal beliefs influence the way a classroom is managed and how information is disseminated. 10 contact hours = 1 CEU.

**EDU 7232. Behavior Disorders. 0.0 Hours.** Class-50.0. Clinical-0.0. Lab-0.0. Work-0.0

This course will focus on the characteristics, causes, and treatment for various behavioral disorders. Participants will develop strategies and adaptations to ensure these students greater success in the classroom.

**EDU 7233. Effective Parent Communication. 0.0 Hours.** Class-50.0. Clinical-0.0. Lab-0.0. Work-0.0

This course will give educators invaluable tools for working with parents. Teachers will discover new ways to involve parents, gain support, and communicate effectively. Many important issues and problem solving techniques will be discussed, including how to build trust, how to handle an "angry parent," and how to keep parents adequately informed without spending an inordinate amount of time writing letters or typing emails. 10 contact hours=1 CEU.

**EDU 7238. Strategies to Improve Academic Performance. 0.0 Hours.**  
Class-50.0. Clinical-0.0. Lab-0.0. Work-0.0

This course will identify key principles of learning that will enhance academic performance. Participants will examine how the role of the teacher and the classroom environment impact learning.

**EDU 7241. Best Practices in Early Childhood Education. 0.0 Hours.**  
Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

The course will include theory, practical application, and insights, enabling the early childhood educator to incorporate developmentally appropriate practices into their classroom. Areas of focus include: identifying major benefits and the need for developmentally appropriate practices; increasing student involvement through developmentally appropriate activities; assessing and modifying curriculum to better serve the needs of Pre-k children.

**EDU 7253. Planning Integrated Curriculum: The Big Picture. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This course is designed to help participants see how it is possible to integrate curriculum. Then participants will practice planning integrated lessons/units to utilize in the classroom. 10 contact hours = 1 CEU.

**EDU 7257. Discipline with Dignity. 0.0 Hours.** Class-50.0. Clinical-0.0. Lab-0.0. Work-0.0

This course will focus on promoting student responsibility through social development rather than coercing students into making constructive changes in their behavior. Marvin Marshall's "Discipline Without Stress Punishments or Rewards" details theories behind the importance of reducing irresponsible behavior by viewing misbehavior as an academic difficulty and an opportunity to teach and learn. This approach creates a classroom in which students feel safe, enjoy learning and care for each other.

**EDU 7260. Successful and Effective Teaching. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This course is recommended for all teachers and substitute teachers. This course utilizes the textbook "The First Days of School: How To Be An Effective Teacher" by Harry K Wong. Topics of the course include: instructional design, classroom management, motivating students, student diversity and professional development.

**EDU 7261. Successful and Effective Teaching. 0.0 Hours.** Class-50.0. Clinical-0.0. Lab-0.0. Work-0.0

Recommended for all teachers and substitute teachers, this course utilizes the textbook "The First Days of School: How To Be An Effective Teacher" by Harry K Wong. Topics of the course include: instructional design, classroom management, motivating students, student diversity and professional development.

**EDU 7262. Creating a Positive Classroom Environment. 0.0 Hours.**  
Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This course will focus on strategies to enhance learning and student achievement by creating a positive, stimulating environment.

**EDU 7266. Utilizing Gradebook and Test Template in Microsoft Works. 0.0 Hours.** Class-50.0. Clinical-0.0. Lab-0.0. Work-0.0

Explore the possibilities of more efficient record- keeping and test creation with the Gradebook and the Gradebook and Test Template features of Microsoft Works. This will make your life as a teacher much easier and more efficient if you are accustomed to traditional methods of recording grades in a grade- book. Discover the tremendous tool in Test Template, and bring a test of your own to try out the features of this component of Microsoft Works. 1.0 CEU's. Prerequisite: Windows Experience.

**EDU 7308. Authors of Current Children's Literature II. 0.0 Hours.**  
Class-50.0. Clinical-0.0. Lab-0.0. Work-0.0

Greater focus on inspiring Authors of Current Children's Literature. New authors will be explored in depth at each session. Powerful teaching strategies will be discussed, demonstrated and developed for use in lesson plans and classroom activities. 1.5 CEUs.

**EDU 7309. Spanish for Educators. 0.0 Hours.** Class-50.0. Clinical-0.0. Lab-0.0. Work-0.0

School administrators, teachers, counselors and support staff will build skills to communicate in Spanish with Hispanic students, parents and visitors. No prior Spanish necessary. 10 contact hours=1 CEU.

**EDU 7310. Conflict Resolution for Educators. 0.0 Hours.** Class-50.0. Clinical-0.0. Lab-0.0. Work-0.0

Explore necessary skills for managing conflict and diffusing conflict situations in school settings. Participants will develop lesson plans for curriculum infusion assuring successful management of conflict situations in their classrooms. 1.5 CEUs.

**EDU 7311. Strategies for Struggling Readers. 0.0 Hours.** Class-50.0. Clinical-0.0. Lab-0.0. Work-0.0

This course will provide practical strategies in every content area for struggling readers in grades 3 through 5. The course will focus on strategies for comprehension skills and innovative ideas for decoding words.

**EDU 7312. Technology to Work Smarter...Not Harder. 0.0 Hours.** Class-50.0. Clinical-0.0. Lab-0.0. Work-0.0

This course will concentrate on using technology to maximize student assessment and accountability. Lesson plan templates, homework hotline, gradebook text banks, and PLATO assessment will be some of the creative ways presented to integrate instruction and technology. Prerequisite: Windows experience. 1.5 CEU's.

**EDU 7313. Integrating Music Into K-12 Classrooms To Enhance Learning. 0.0 Hours.** Class-50.0. Clinical-0.0. Lab-0.0. Work-0.0

Experience ways to increase student achievement and motivation through the use of music in the classroom. 10 contact hours = 1 CEU.

**EDU 7314. Making the Most of Tutoring. 0.0 Hours.** Class-50.0. Clinical-0.0. Lab-0.0. Work-0.0

This course will explore techniques designed around the Learning Strategies Model for effective tutoring and is designed to give participants ideas and strategies to improve tutoring.

**EDU 7315. Teacher Talk. 0.0 Hours.** Class-50.0. Clinical-0.0. Lab-0.0. Work-0.0

New - Teachers will meet on a monthly basis to discuss current issues in the education profession in an informal peer group setting. Possible discussion topics include curriculum, parental involvement, professional stress, diversity and other issues as decided upon by the participants. Guest speakers are available for each of the chosen topics. No text required. 1.5 CEUs.

**EDU 7316. Implementing Guided Reading in the K-2 Classroom. 0.0 Hours.** Class-50.0. Clinical-0.0. Lab-0.0. Work-0.0

New - Explore multiple components of Balanced Literacy with an emphasis on Guided Reading. Participants will learn the role of a teacher and the role of a student within the framework of a Balanced Literacy Program.

**EDU 7317. Interactive Writing Techniques for K-2. 0.0 Hours.** Class-50.0. Clinical-0.0. Lab-0.0. Work-0.0

New - Experience strategies to support developing readers and writers from preK-2nd grade, as well as small groups of 2nd or 3rd graders who need stronger support in early writing skills. Examine the technique of "sharing the pen" while viewing teacher demonstrations.

**EDU 7318. Teaching Students Who Speak Other Languages. 0.0 Hours.** Class-50.0. Clinical-0.0. Lab-0.0. Work-0.0

This course will assist classroom teachers to discover the richness of cultural differences and address the academic needs of students who speak other languages. Topic areas include: multicultural instructional strategies, addressing individual uniqueness and cultural diversity, building relationships with students and parents, resources (community, local and state), and enhancing classroom interaction between all students.

**EDU 7319. Teacher Resources. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This course will provide teachers with resources available to them at the local, state, and national levels. Community programs, non-profit organizations, published materials, and webbased sources will be addressed in the areas of curriculum design, social services, incentive programs, and educating students with special needs. Purchase materials in class.

**EDU 7320. T.R.E.E.S-Training Resources for Early Childhood Educators. 0.0 Hours.** Class-50.0. Clinical-0.0. Lab-0.0. Work-0.0

New - Professionals working with pre-schoolers - 2nd grade, will learn to help at-risk children develop their interpersonal and social skills, while reducing inappropriate behaviors of individual students in group settings. 1.5 CEUs.

**EDU 7321. C.C.C - Creative Career Connections. 0.0 Hours.** Class-50.0. Clinical-0.0. Lab-0.0. Work-0.0

New - Educators in any field will experience professional and personal growth while expanding their creative abilities and working through blocks that contribute to career burnout. This interactive course will build on concepts from "The Artist's Way" and other sources. 1.5 CEUs.

**EDU 7322. Exploring Expressive Arts. 0.0 Hours.** Class-50.0. Clinical-0.0. Lab-0.0. Work-0.0

New - Engage in a variety of expressive art & creative mediums and explore their application in teaching multiple concepts to children and adolescents. No artistic experience is required as the focus is on the revolving process rather than the end product. 2.0 CEUs.

**EDU 7323. Celebrating Classroom Diversity. 0.0 Hours.** Class-50.0. Clinical-0.0. Lab-0.0. Work-0.0

New - Provides educators with the tools to celebrate diversity, and help reduce racial, religious, ethnic and social prejudice in their classrooms. Activities for personal bias, valuing self, conflict management, communication strategies, and team building will be provided. Purchase text in CPCC bookstore. 2.0 CEU.

**EDU 7324. Accommodating Diverse Learners. 0.0 Hours.** Class-50.0. Clinical-0.0. Lab-0.0. Work-0.0

This class is for teachers of diverse learners across grade levels and content areas. Learn strategies for teaching, reading, writing, math, science and social studies; and developing, selecting and modifying curriculum. Concrete examples and recommendations will be provided.

**EDU 7325. PRAXIS II. 0.0 Hours.** Class-50.0. Clinical-0.0. Lab-0.0. Work-0.0

A 10-hour comprehensive review of information on the Praxis II Test for Elementary Education.

**EDU 7326. Building Community Through Inclusion. 0.0 Hours.**

Class-50.0. Clinical-0.0. Lab-0.0. Work-0.0

The focus of this course is the design and assessment of teaching and learning models that promote effective practices for the full integration of all students as productive members of classroom learning communities. Participants will review current special education legislation; discuss teacher roles and collaborative responsibilities with parents, colleagues, and community agencies; and reflect on their own competence in promoting positive social interaction among students. Course emphasis is on the development of accommodation strategies that are an integral part of the classroom structure and are based on curricular expectations as well as the abilities and needs of individual students. Course content will also include teacher-generated case studies and research-based recommendations that address the learning needs and well-being of all students.

**EDU 7327. Writers Workshop K-4. 0.0 Hours.**

Class-50.0. Clinical-0.0. Lab-0.0. Work-0.0

This course will assist your teaching to turn students into enthusiastic writers and make teaching - and learning-creative writing a welcome part of the school day. Explore teaching strategies for implementing a writing workshop approach in your classroom. The instructor will provide helpful, practical skills and advice pertaining to: writing development, inventive spelling, topic selection, writing rehearsal and reinforcing the joy of writing. Purchase text prior to class, 3.0 CEUs.

**EDU 7328. Integrating Technology and Children's Literature. 0.0**

Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This class will explore the use of technology as an essential component in studying Children's Literature and the new paradigm that goes beyond paper. 10 contact hours = 1CEU.

**EDU 7329. Spanish for Educators II. 0.0 Hours.**

Class-50.0. Clinical-0.0. Lab-0.0. Work-0.0

This course continues to build Spanish vocabulary, with emphasis on teacher-pupil relationships and classroom management. Additional topics for discussion will include communicating with adults, attending to emergencies, and community resources. 10 contact hours = 1 CEU.

**EDU 7330. Preparing for the Praxis I Test. 0.0 Hours.**

Class-50.0. Clinical-0.0. Lab-0.0. Work-0.0

This course will review pre-professional skills in reading, writing and mathematics in preparation for the Praxis I exam. 10 contact hours = 1 CEU.

**EDU 7331. Students As Presentors & Speakers. 0.0 Hours.**

Class-50.0. Clinical-0.0. Lab-0.0. Work-0.0

New - Classroom exercises and activities for creating masterful speakers, presenters and storytellers. Ideas to help assist students overcome their fear of public speaking and flourish in front of an audience. Purchase text in CPCC bookstore. 1.5 CEUs.

**EDU 7332. Taking Care of the Counselor. 0.0 Hours.**

Class-50.0. Clinical-0.0. Lab-0.0. Work-0.0

New - Current ideas for dealing with the diversity of roles, budgets, populations and expectations are presented. Professional resources and materials are shared. No text. 2.0 CEUs.

**EDU 7333. Reading, Writing and Technology in Upper Grades, 6-12.**

0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This course offers strategies for teaching reading and writing across the curriculum, using technology as a tool to enhance learning.

**EDU 7334. Using Socratic Seminar to Improve Classroom****Discussion. 0.0 Hours.** Class-50.0. Clinical-0.0. Lab-0.0. Work-0.0

Recommended for educators and designed to help students foster dialectic relationships by participating in Socratic Seminars. Teachers will learn the principles of Socratic Seminar, the types of questions facilitators ask during these seminars, and will learn and practice techniques to engage all students in the discussion. In the end, teachers will know how to incorporate Socratic Seminars in their curricula to help students better understand the subject matter. Purchase text prior to class, 2.0 CEUs.

**EDU 7341. Strategies for Struggling Readers II. 0.0 Hours.**

Class-50.0. Clinical-0.0. Lab-0.0. Work-0.0

New - Part two of our Strategies for Struggling Readers, with a greater focus on current reading techniques and more creative classroom activities. Purchase text in CPCC bookstore. 2.0 CEUs.

**EDU 7343. Elementary Social Studies. 0.0 Hours.**

Class-50.0. Clinical-0.0. Lab-0.0. Work-0.0

New-This course will demonstrate teaching strategies for Elementary Social Studies K-4. Topic areas include: culture and diversity, global historic perspectives, geographic communities, global connections, and North Carolina geography and history. Participants will develop lesson plans and activities aligned with North Carolina Standard Course of Study K-4. No text required, purchase materials in class. 2.0 CEUs.

**EDU 7344. Understanding The Learner. 0.0 Hours.**

Class-50.0. Clinical-0.0. Lab-0.0. Work-0.0

Course addresses physical, emotional, and cognitive development from early childhood through late adolescence. Textbook required. 3.0 CEUs.

**EDU 7345. Teaching Creative Math, Grades 6-12. 0.0 Hours.**

Class-50.0. Clinical-0.0. Lab-0.0. Work-0.0

This course will explore creative Mathematical Thinking and Learning. Topic areas include: looking at math through the students eyes, effective teaching strategies to assure all students are successful in math and creative ideas to reach reluctant learners. This class is intended for instructors who teach grades 6-12.

**EDU 7346. Elementary Science Made Easy K-4. 0.0 Hours.**

Class-50.0. Clinical-0.0. Lab-0.0. Work-0.0

New-This course will demonstrate teaching strategies for Elementary Science K-4. Topic areas include; teaching and understanding science principles, the scientific method, inquiry-centered science, and hands-on exploratory science. Participants will develop lesson plans and activities aligned with NC Standard Course of Study. No textbook required, purchase materials in class, 1.5 CEUs.

**EDU 7347. Intermediate Writing for Grades 3-5. 0.0 Hours.**

Class-50.0. Clinical-0.0. Lab-0.0. Work-0.0

New-Learn practical and effective strategies to support writing instruction for grades 3-5. Explore the influence of instructional language on teaching writing, from specific materials to fine teaching points. Learn how writing can be used as a tool for inquiry across the curriculum - in content areas as well as in Literature. Purchase text prior to class, 1.5 CEUs.

**EDU 7349. Character Education in the Classroom. 0.0 Hours.**

Class-50.0. Clinical-0.0. Lab-0.0. Work-0.0

Topic areas include: history and theory of integrating character education across the curriculum in any grade level, and review of current best practices for classroom implementation. 10 contact hours = 1 CEU.



**EDU 7350. Super Teaching Methods. 0.0 Hours.** Class-50.0.

Clinical-0.0. Lab-0.0. Work-0.0

Methods for developing effective lesson plans that incorporate learning styles, curriculum integration, and differentiating instruction are explored and shared. Learn to create a stimulating classroom environment. No textbook required. 3.0 CEUs.

**EDU 7351. GAMES - Group Applying Meaningful Engaging Skills. 0.0 Hours.** Class-50.0. Clinical-0.0. Lab-0.0. Work-0.0

Natural learning develops through using games in classrooms. Games provide a foundation for developing social skills, enhancing academics, increasing attention, motor skills and emotional skills. Participants will experience numerous games and evaluate practical application and modifications needed for implementation in their classroom. Purchase materials in class. 2.0 CEUs.

**EDU 7352. Captivate, Activate and Energize Students. 0.0 Hours.**

Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

Explore research-based classroom strategies to arouse curiosity, promote participation, facilitate transitions, boost confidence and enhance understanding and retention. Participants will discuss and actively engage in more than 50 activities.

**EDU 7353. Reading in Elementary Classrooms. 0.0 Hours.**

Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

Elementary reading presents successful approaches for teaching elementary reading across the curriculum. Topic areas include: phonics, comprehension skills, vocabulary building and reading for pleasure, as well as approaches to addressing reading difficulties. Participants leave with a wealth of knowledge and an action plan they can use in their classroom. 10 contact hours = 1 CEU.

**EDU 7360. Effective Teacher Assistants. 0.0 Hours.** Class-50.0.

Clinical-0.0. Lab-0.0. Work-0.0

This course will acquaint teachers, teacher assistants and support staff with effective teacher techniques. Topic areas include characteristics of effective teachers, classroom management, teaching for lesson mastery, child development and addressing the needs of exceptional children. Activities, videos and practical applications will be provided and suggestions for usage in any classroom. Purchase text prior to class, 3.0 CEUs.

**EDU 7370. Reaching and Teaching Teenage Students. 0.0 Hours.**

Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This course is recommended for teachers, counselors, and families of adolescence students. Together we will take a journey into the heart of American adolescence. Topic areas include the physical, cognitive, moral and social development of adolescence. Textbook required. 3.0 CEUs.

**EDU 7380. Integrating Art, Health and PE in Elementary Education. 0.0 Hours.** Class-50.0. Clinical-0.0. Lab-0.0. Work-0.0

Developed in conjunction with Blumenthal Performing Arts Center's Education Institute, this course models theory and applications for integrating Art, Health, and PE in elementary education classrooms. Participants will develop lesson plans and activities aligned with NC Standard Course of Study. No textbook required, 3.0 CEUs.

**EDU 7381. Work Based Learning Organizations. 0.0 Hours.**

Class-50.0. Clinical-0.0. Lab-0.0. Work-0.0

New-This course addresses issues in work-based learning programs, such as developing integrated academic and vocational curricula and supervising and evaluating students' work-based learning experiences. No text required, 3.0 CEUs.

**EDU 7390. The Basics of Computers and Microsoft Office for Educators. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

Basic components of Microsoft Office 2007, Word, Excel, and PowerPoint with practical applications for classroom use are introduced. Personal software required: Microsoft Word, Excel, and PowerPoint (Microsoft Office 2007). 10 contact hours = 1 CEU.

**EDU 7391. Preparing for the Praxis I Test. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This course will review pre-professional skills in reading, writing, and mathematics in preparation for the Praxis I exam. 10 contact hours = 1 CEU.

**EDU 7392. PRAXIS II. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

A ten hour comprehensive review of information on the PRAXIS II Test for Elementary Education.

**EDU 7393. Integrating Technology Into the Classroom. 0.0 Hours.**

Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This class will explore practical and efficient ways to integrate technology resources and technology base methods into everyday curriculum-specific practices. This class will present the fundamentals of computers and educational technology in an easy-to-understand format. 10 contact hours = 1 CEU.

**EDU 7394. Vocabulary Strategies for Content. 0.0 Hours.** Class-440.0.

Clinical-0.0. Lab-0.0. Work-0.0

This online course will support regular classroom teachers, reading teachers and literacy facilitators. Participants will explore vocabulary strategies and techniques that every teacher can use to meet the academic needs of the students in their schools and classrooms. Teachers will use text as a guideline for online participation. 10 contact hours = 1 CEU.

**EDU 7395. Discipline with Dignity. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This course will focus on promoting student responsibility through social development rather than coercing students into making constructive changes in their behavior. Marvin Marshall's "Discipline Without Stress Punishments or Rewards" details theories behind the importance of reducing irresponsible behavior by viewing misbehavior as an academic difficulty and an opportunity to teach and learn. This approach creates a classroom in which students feel safe, enjoy learning and care for each other.

**EDU 7396. Balanced Literacy Overview. 0.0 Hours.** Class-440.0.

Clinical-0.0. Lab-0.0. Work-0.0

Teachers will learn the framework behind and the goals of Balanced Literacy. During the class teachers will focus on the Big Five of Literacy (phonemic awareness, phonics, vocabulary, fluency, and comprehension) and their implementation in the classroom. Teachers will receive an overview of some of the balanced literacy components which may include reading aloud, shared reading, guided reading, independent reading, shared writing, interactive writing, guided writing or writing workshop and independent writing.

**EDU 7397. Student Engagement Techniques. 0.0 Hours.** Class-440.0.

Clinical-0.0. Lab-0.0. Work-0.0

Would you like to gain a better understanding of the distinctions between student engagement, motivation and active learning? As a teacher, how do you strive to reach and maintain engagement and motivation levels that lead to successful learning experiences for all students? Join us to explore techniques and challenges for engagement.

**EDU 7399. 99 Instructional Strategies. 0.0 Hours.** Class-50.0. Clinical-0.0. Lab-0.0. Work-0.0

New- Participate in over 99 instructional strategies, applicable for teaching any subject, any grade. Strategies will cover areas of introducing a lesson, student mastery, culminating activities and assessment. This course is designed around best practices from Marzano S.E.R.V.E, Gardner and other sources. Purchase materials in class, 2.0 CEUs.

**EDU 7400. Steps to Success in an Online Course. 0.0 Hours.** Class-50.0. Clinical-0.0. Lab-0.0. Work-0.0

Take an online course with confidence. This course will access and enhance your current technology skills, allow you to experience a Blackboard online course environment, and learn proven strategies to successfully complete your online course. Topic areas include; e-learning vocabulary, navigating through and online course, virtual communication, submitting assignments, online assessments, time management, exposure to several online learning environments, and general characteristics common to most online environments. This is a web enhanced class, email and internet access required.

**EDU 7401. Key Train - Work Keys. 0.0 Hours.** Class-50.0. Clinical-0.0. Lab-0.0. Work-0.0

This is an open lab with software available for training to assist paraprofessionals in meeting quality standards required for the classroom. The Computer Based Instruction provides hours of practice before the work-keys test is administered.

**EDU 7411. Leadership Challenges. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

Increase your own leadership effectiveness and strengthen relationships with students, parents and colleagues. This comprehensive course covers five key leadership skills: encouraging, enabling and empowering others, challenging the process, and modeling the way. The format is interactive; you'll evaluate your current leadership skills, discuss leadership challenges, and complete a reflective application assignment in the context of your organization.

**EDU 7412. Communication. 0.0 Hours.** Class-50.0. Clinical-0.0. Lab-0.0. Work-0.0

For leaders, good communication is imperative. This course provides practical suggestions and application scenarios on ways to enhance your speaking, writing and interpersonal skills. Topic areas include; oral and written communication, the art of listening, presentations and mentoring. All participants complete a reflective application assignment in the context of their organization. This course blends classroom instruction with required 5 hours on-line assignments. Internet access and an email account are required. Purchase text books prior to class. 1.5 CEUs.

**EDU 7413. Project Management. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

With accelerated schedules driving most leaders today, project management is a necessary tool. This course emphasizes how to plan and manage projects, how to keep control of priorities and deadlines, and how to establish time management skills for you and your staff. You'll learn the basic skills of how to create a plan, delegate and implement it, monitor the progress and deliver as anticipated. All participants complete a reflective application assignment in the context of their organization. This course blends classroom instruction with required 5 hours on-line assignments. Internet access and an email account are required. Purchase materials in class. 10 contact hours = 1 CEU.

**EDU 7414. Personnel. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

Building and maintaining positive employee relationships are important in achieving organizational goals. This course emphasizes resolving conflict, creating positive cultures, facilitating discussions, dealing with performance issues, building teams, and understanding legal aspects. All participants complete a reflective application assignment in the context of their organization. This course blends classroom instruction with required 5 on-line assignments. Internet access and an email account are required. Purchase text books prior to class. 1.5 CEUs.

**EDU 7415. Diversity. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This course assists the participant in analyzing issues related to our multicultural community. Participants will identify, analyze and work toward an understanding of the possible solutions associated with serving in an administrative capacity in a diverse workplace, school, etc. This course is a hybrid course, email and internet access required. 1.5 CEU's.

**EDU 7416. Community Relations. 0.0 Hours.** Class-50.0. Clinical-0.0. Lab-0.0. Work-0.0

This course assists the participant in developing the capacity to facilitate effective meetings, build community alliances and create productive relationships with professional organizations in order to maintain productive relationships. This course is a hybrid course, email and internet access required. 1.5 CEU's.

**EDU 7417. Conflict Resolution for Administrators. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This course assists administrators in learning how to diffuse escalation situations, reduce conflict between staff members, parents and students. Topics will include conflict management styles, hints on dealing with difficult people and decreasing conflict school-wide.

**EDU 7418. Special Education Law for Administrators. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This course assists administrators who are working to better understand the needs of those with disabilities. Special Education issues and laws will comprise the bulk of the course discussion. This course will help administrators keep current on issues of law and compliance within the ever-changing setting of students with disabilities. The course will add an emphasis on appropriate discipline practices with special education students. See [www.cpcctraining.org/teacher](http://www.cpcctraining.org/teacher) for text information.

**EDU 7501. Teaching Smarter with SMART Boards. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

SMART Boards are revolutionizing today's classroom. Using these exciting interactive whiteboards, you can create multimedia lessons that engage learners and address their diverse needs. In this class, you'll discover how to create outstanding presentations with SMART Board and SMART Notebook technology.

**EDU 7502. Solving Classroom Discipline Problems. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

Why do some teachers enjoy peaceful, orderly classrooms while others face daily discipline battles? The answer is that some teachers know the secrets to solving discipline problems. This course reveals those secrets and presents a step-by-step approach to effective, positive classroom discipline.

**EDU 7503. Empowering Students with Disabilities. 0.0 Hours.**

Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

Teaching students with disabilities is a rewarding challenge and this course gives you the tools you'll need to succeed. No matter what grade you teach-from preschool through high school-you'll learn powerful strategies you can put to work immediately in your classroom. In addition, you'll gain the knowledge you need to understand and cope with the most common disabilities you'll encounter.

**EDU 7504. Common Core Standards for English Language Arts K-5. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

Discover the Common Core State Standards (CCSS) for English language arts, and gain confidence in applying them to the K-5 classroom. Explore the basic elements of the standards-strands, anchor standards, and grade articulations-and see how they relate to each other. Identify the roles of technology, homework, curricula and assessments in the classroom and be inspired by easy-to-use, practical examples of CCSS-aligned lessons that you can use with your own students.

**EDU 7505. Guided Reading and Writing: Strategies for Maximum Student Achievement. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

Learn to improve student literacy as an accomplished teacher shares the secrets of turning guided reading strategies into opportunities for teaching writing. Study the reasons reading and writing are so difficult for students. With a framework in place, investigate ways to modify this basic recipe for a variety of K-12 circumstances that result in good writing habits and the traits of a productive writing conference.

**EDU 7506. Teaching Students With Autism: Strategies for Success. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

Reaching and teaching students with high-functioning autism and Asperger's Syndrome requires a delicate balancing act: understanding how their brains are wired, helping them turn challenges into opportunities and learning to enjoy the rich perspective they bring to the classroom. Discover the neurobiology behind these disorders and the way it affects students' behavior, learning and thinking. Learn creative, easy, low-budget strategies to help these kids succeed in the classroom and beyond.

**EDU 7507. Homeschool with Success. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

Learn what you need to know to homeschool your children. Discover how to make their transition to homeschooling both fun and effective. Learn how to choose the best type of homeschooling for your child and much more. When you finish this course, you'll be able to plot your homeschooling course for years to come.

**EDU 7508. Differentiated Instruction in the Classroom. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

Differentiated instruction (DI) is becoming a mainstay in classrooms across the country as educators are starting to see the ways that the traditional classroom settings limit their ability to reach diverse learners. Explore 10 practical DI integration strategies. Count on at least three sample integration lessons on each strategy and just think of all the ways that you can apply them to improve learning outcomes for your students. This course is a must for today's teachers who often have to differentiate quickly and with a minimum of resources.

**EDU 7509. Solving Classroom Discipline Problems II. 0.0 Hours.**

Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

Learn to deal effectively with serious discipline problems and help even the most challenging students. You'll discover a new six-step approach to solve severe and chronic problems, including bullying, fighting, using abusive language, stealing and refusing to work. Examples set in elementary, middle, and high school classrooms help you see how to put the ideas to work in your own situations.

**EDU 7510. Integrating Technology in the Classroom. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

Study how to use tools including wikis, podcasts, and blogs effectively for integrating technology into the classroom. You'll cover ways to enhance your subject material with quick-and-easy, standards-based solutions for more interactive lesson plans.

**EDU 7511. Enhancing Language Development in Childhood. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

Discover how children learn to process language and how they become proficient speakers and thinkers in this fun and user-friendly course for parents, teachers, and caregivers. Learn how to enrich your child's life by stimulating his or her continued speech, brain, and language development in an enjoyable, age-appropriate, and natural way.

**EDU 7512. Singapore Math: Number Sense and Computational Strategies. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

Explore what Singapore Math is and how it has become such a powerful and highly regarded math curriculum. Discover how number sense and place value instruction are the basis for all Singapore Math while learning a variety of computational strategies to make addition, subtraction, multiplication, and division a cinch.

**EDU 7513. Guided Reading: Strategies for the Differentiated Classroom. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

Differentiated instruction tactics will help you understand how your students learn so you can teach in a way that makes sense to them. The result is a classroom full of students who are able to negotiate increasingly challenging texts with unprecedented fluency.

**EDU 7515. Content Literacy: Grades 6-12. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

Review the new literacy standards to see how they relate to the content areas, and uncover the many ways adolescent development is connected to effective teaching. Explore differentiated education and see how easy it can be to deliver content to students at varying levels of literacy development.

**EDU 7516. Spanish in the Classroom. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

Learn the essential Spanish for teachers and bridge the communication gap with your Spanish-speaking students and parents. Discover some survival phrases for the parent-teacher conference as you learn to describe how a child is doing, talk about academic or behavior problems, and discuss grades and homework.

**EDU 7517. Using the Internet in the Classroom. 0.0 Hours.**

Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

Teach your students how to locate and evaluate internet resources. Improve the caliber and amount of discussion through the use of e-mail and discussion boards while learning how to safeguard your students and their personal information while they are using the internet.

**EDU 7518. Creating a Classroom Website. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

Learn how to create a classroom website in this fun, easy-to-understand course for teachers. In no time, you'll build a site with text, images, animations, tables, links, and more. You will also create a WebQuest and a blog to add to your site. Offered in partnership with ed2go.

**EDU 7519. Microsoft PowerPoint 2013 in the Classroom. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

In this course, you'll learn how to create captivating lessons and attention-grabbing classroom presentations using Microsoft PowerPoint 2013. You'll cover the basics of this MS Office program including creating slides, using templates, inserting text, changing background colors, creating WordArt titles, using SmartArt graphics, and adding slide transitions. You'll develop advanced skills such as inserting graphics, sound, video, custom animations, chart animations, timed transitions, and links. You will need Microsoft Windows Vista, XP, Windows 7, or Windows 8 and Microsoft PowerPoint 2013 or Microsoft PowerPoint Home and Student 2013 or Professional Edition or the Home and Business Edition 2013 (all are acceptable). This course is not suitable for Macintosh users or for users of older versions of Microsoft PowerPoint. Offered in partnership with ed2go.

**EDU 7520. An Introduction to Teaching ESL/EFL. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This course will teach you how to understand who your students are and identify the needs they have. You will learn how to choose the most appropriate materials and activities for your classroom, explore innovative approaches like Communicative Language Teaching and the lexical approach, and gain new insights and ideas for teaching vocabulary, grammar, listening, speaking, reading, and writing. You'll also discover what some of your options are in designing fair and accurate tests. Students who successfully complete this course will receive a TESOL Certificate of Completion. Course materials are developed by Heinle I Cengage Learning, a global leader in ESL/EFL materials. Course content is approved by the TESOL Professional Development Committee. Offered in partnership with ed2go.

**EDU 7521. Practical Ideas for the Adult ESL/EFL Classroom. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

In this course you'll discover ways to teach ESL that create a meaningful and positive learning environment for your students. You'll gather a wealth of principles for how to choose truly effective activities for such skills as listening, speaking, reading, writing, grammar, and pronunciation. Along the way, you'll pick up practical ways to incorporate both traditional and alternative forms of assessment into your classroom teaching. And finally, By the end of this course, you'll be teaching ESL in a way that helps your students move skillfully from the classroom to the real world! Course materials are developed by Heinle I Cengage Learning, a global leader in ESL/EFL materials. Course content is approved by the TESOL Professional Development Committee. Students who successfully complete this course receive a TESOL Certificate of Completion. Offered in partnership with ed2go.

**EDU 7522. Teaching ESL/EFL Grammar. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

In this course, you'll come to see English grammar as a three-dimensional process that's useful in bringing coherence, cohesion, and texture to writing and speech. We'll begin by considering seven definitions of grammar that we'll draw on throughout the course. We'll also discuss the differences between patterns and rules, and why second-language learners benefit from our instruction on both. We'll contrast rote or mechanical practice with meaningful practice, and we'll go over guidelines for creating activities and adapting your textbook exercises to get students working on the unique learning challenge presented by each different grammatical structure. Course materials are developed by Heinle I Cengage Learning, a global leader in ESL/EFL materials. Course content is approved by the TESOL Professional Development Committee so students who successfully complete this course receive a TESOL Certificate of Completion. Offered in partnership with ed2go.

**EDU 7523. Teaching ESL/EFL Reading. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

In this course, you'll learn how to show your students the value of reading to motivate them to become strong readers. We'll explore the core skills of intensive reading. Then we'll examine extensive reading and how to integrate it into your curriculum. Next, we'll cover ways to bring vocabulary teaching into your reading classroom. We'll also look at ways to help your students develop a fluent reading rate and use strategies for reading successfully. We'll round out our time together by discussing how to plan effective lessons, design a strong reading curriculum, select appropriate reading materials, and assess students to encourage their growth. Course materials are developed by Heinle I Cengage Learning, a global leader in ESL/EFL materials. Course content is approved by the TESOL Professional Development Committee so students who successfully complete this course receive a TESOL Certificate of Completion. Offered in partnership with ed2go.

**EDU 7524. Teaching ESL/EFL Vocabulary. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

In this course you'll discover what the different types of vocabulary are, as well as how to accurately assess what your students already know and what they need to learn. You'll also explore the most powerful way of teaching vocabulary as you teach ESL: across the four strands. These four strands include meaning-focused input (listening and reading), meaning-focused output (speaking and writing), language-focused (deliberate) learning, and fluency development. Course materials are developed by Heinle I Cengage Learning, a global leader in ESL/EFL materials. Course content is approved by the TESOL Professional Development Committee so students who successfully complete this course receive a TESOL Certificate of Completion. Offered in partnership with ed2go.



**EDU 7525. Understanding Adolescents. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

In this course, an experienced social worker will help you gain a deep understanding and appreciation of your adolescent's development and behavior. You'll uncover the secrets of the adolescent mind and gain valuable information on how they think, how they feel, and how their identities develop. Parents, family members, teachers and related support staff, child and youth workers, counselors, nurses and the like will all benefit from the information shared in this course. You'll learn about the many physical, emotional, and cognitive changes that affect the teens in your life, and you'll understand the significance of these changes both for you and the adolescent. You'll look into relationships both in and outside of the home and the development of a teen's identity. You'll explore personality, moral development and the role of faith. Finally, you'll gain an understanding as to how teens are affected by stress, including common defense mechanisms, coping techniques, and common mental health issues.

**EDU 7526. Singapore Math Strategies: Advanced Model Drawing for Grades 6-9. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

In this course, you'll master model drawing, a revolutionary technique for teaching problem-solving to middle school math students. Model drawing is a core part of Singapore Math, a base-10 math program that forms the foundation of math instruction in Singapore. When you introduce model drawing into your classroom, your students will succeed with word problems, build math skills, and develop self-confidence. And they'll even look forward to math! It is recommended that students take the Singapore Math Strategies: Model Drawing for Grades 1 - 6 as a prerequisite for this course. Offered in partnership with ed2go.

**EDU 7527. Singapore Math Strategies: Model Drawing for Grades 1-6. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

In this professional development course for teachers, you'll get the training you need to start teaching model drawing, the powerful Singapore Math strategy that gives word problems a visual context. As a teacher, you know that many students groan when it's time to solve word problems. Why is that? Are the problems too difficult? Do students get lost trying to decipher the wording or figure out the computation? Do they simply not know which strategy to use? Actually, it's a combination of all these issues. Luckily, model drawing, a Singapore Math strategy for working word problems, will help your students start to enjoy math in a way they may never have before. Offered in partnership with ed2go.

**EDU 7528. Teaching Math: Grades 4-6. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

Reinvent math instruction for grades 4-6 by bringing hands-on learning, inexpensive manipulatives, and real-world connections into your classroom. Whether you're a new teacher or a seasoned pro, this course will help you get your students excited about math! Over the next six weeks, you'll learn the best ways to walk students through the complexities of elementary school math. From teaching them the best way to learn complicated vocabulary to turning them into problem-solving detectives, you'll discover lots of fun and practical ways to extend your students' learning into their homes, the community, and the world. Offered in partnership with ed2go.

**EDU 7529. Ready, Set, Read!. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

Take this opportunity to find out how children really learn to read and write. Explore current research that cuts through the media messages about reading wars and the right way to teach children. Learn by reading stories about children, doing interactive assignments, and exploring the latest in parent and childcare information. You will see everyday children's play with a new eye as you understand how play can connect to literacy. Offered in partnership with ed2go.

**EDU 7530. Response to Intervention: Reading Strategies That Work. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

In this six-week course, you'll learn response to intervention (RTI) strategies that ensure the struggling readers in your classroom get the help and education they need. RTI is research based and gives us a strategic plan to bring tiered interventions to our students, at their reading level and with their unique challenges in mind. Helping them with phonics, fluency, vocabulary mastery, comprehension, and writing, these intervention strategies tackle the toughest literacy problems with flexibility and creativity. You'll discover tools like Elkonin Boxes, alphabetic arcs, Bloom's Taxonomy, and new and exciting graphic organizers. Whether you're working with struggling readers in kindergarten or 12th grade, you'll find that these strategies work with a full 80% of students, without the need for special pull-outs or extra IEP intervention. Offered in partnership with ed2go.

**EDU 7531. Teaching Writing: Grades K-3. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

In this course, you'll examine the developmental stages of writing, from scribbling to the standard spelling stage, so that you can foster your students' skills and gently nudge them to grow as authors. This course is full of practical ideas that you can use to motivate students in your classroom. You'll look at tools such as the writer's workshop, the six traits of writing, and genre studies for ways to teach students about writing. You'll see how each of these tools can be used by teachers to encourage early elementary writers. As your students become better writers, they will become better readers, and you'll see how well reading and writing instruction work together to support each other. Offered in partnership with ed2go.

**EDU 7532. Teaching Writing: Grades 4-6. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

In this teacher-training course, you'll learn from an experienced educator how to motivate and assist developing writers. We'll begin with an overview of the writing basics, focusing on the importance of the task, audience, and purpose. Then we'll delve into how to organize your materials to create an inviting writing environment. We'll discuss each step of teaching writing and the strategies you can use with your students. You'll also work on strengthening your students' writing using technology. Along the way, you'll develop engaging lessons for literary response, narrative writing, expository writing, and persuasive writing. We'll look at the characteristics of each type of writing, and you'll get practical suggestions for teaching them to your class. Two writing approaches we'll cover, 6+1 Trait Writing and Writer's Workshop, will enable you to put everything you learn in this course into a workable format. You'll also discover the secrets of effective writing assessment as you learn about evaluation tools like portfolios and rubrics. Offered in partnership with ed2go.

**EDU 7533. Teaching Science: Grades 4-6. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

Want to increase your effectiveness as a science teacher for the middle grades? Join us and learn about the nature and history of science as well as how to help students in this age group grasp the scientific method. You'll receive lots of worksheets and specific examples of some great experiments you can use in your own classroom. We'll cover principles of direct instruction and many different learning and organizational tools that will benefit your students. You'll even learn how you can use science class to improve the emotional climate in your classroom.

**EDU 7534. Praxis Core Preparation. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

Are you a prospective teacher who needs to pass the Praxis Core Exam? Have you already attempted the Praxis Core and not been successful? If you answered yes to either of these questions, then this course is for you! You'll develop all the skills you need for the test as we review and prepare for everything it includes. You'll get familiar with the different types of questions that appear on the reading and writing tests. You'll master the many areas of math that you'll be tested on: number operations, negative numbers, exponents, square roots, order of operations, decimals, fractions, percentages, algebra, geometry, systems of measurement, and probability and statistics. To prepare for the two essays, we'll discuss what constitutes high scoring essays. We'll also go through the process of writing each essay in the amount of time allotted. You'll learn useful test-taking strategies and get plenty of practice questions that are similar to what you'll find on the exam. You'll also have the opportunity to take a full-length practice test in each subject area. Using clear explanations, numerous examples, graphics, animation, and videos, this course will not only prepare you for the Praxis Core, but do so in a way that's fun and interesting. After completing this course, you'll be totally ready to pass the Praxis Core Exam!

**EDU 7537. Creating Classroom Centers. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

Discover how easy and effective classroom centers can really be! In this course, you'll learn how to create and implement activities that boost independent learning in the classroom. You'll start out by learning what centers are (and aren't), what benefits they offer, and how to make the most of them. Next, you'll explore some very common mistakes teachers make with centers and gain tips for keeping your planning time to a minimum. You'll also get step-by-step instructions for creating a centers schedule all your students can use independently-even if they can't read. The insights you'll gain will show you how to adjust your centers routine for both your fastest learners and those who need more time.

**EDU 7538. Creating the Inclusive Classroom: Strategies for Success. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

In this professional development course for teachers, you'll get the training you need to reach the diverse mix of students you face every day-learning proven strategies for inclusion that turn diversity into opportunity. With a mix of students who have learning disabilities, neurobiological disorders, and physical challenges, the modern classroom requires an efficient and effective teacher who can prioritize under tight deadlines and be creative on demand. Over the next six weeks, you'll learn how to be the kind of super teacher who can guide every student toward academic success. And do you know what the best part is? You don't have to tear your hair out in order to adapt each lesson so that it makes sense for all your students!

**EDU 7539. Differentiating K-12 Assessments. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

Differentiated assessment is the key to helping every student succeed-and no matter what grade you're teaching, this course will give you the tools you need to gather your assessment data quickly and easily. You'll begin by exploring strategies for performing pre-assessments, formative (ongoing) assessments, and summative assessments. Next, you'll discover how to identify and share learning goals, gather assessment information, adjust your instruction, and provide feedback to your students. Real-life examples will help you see how differentiated assessment provides direction for improvement, promotes confidence, and motivates your learners to do their best.

**EDU 7540. Survival Kit for New Teachers. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

Feel a little trepidation before entering your classroom? You're not alone! Whether you're already teaching, a newly credentialed graduate, or a substitute looking to transition to full-time, this course will provide you with proven tools, tips, and tricks to make your early years in the classroom a breeze. Teaching is a balancing act, and it requires a blend of subject expertise and classroom skills to reach all of your diverse learners. Discover how to write winning lesson plans, reach diverse learners through differentiated instruction, communicate clearly, plan memorable events, and most important, keep stress at bay so you can feel good about going to work every morning.

**EDU 7541. Teaching Students With ADHD. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

In this course, you'll discover practical ways to help children with ADHD control their behavior and succeed in school. And you'll be learning from the real experts: the children themselves. You'll find out how Kristi controls her behavior and how Wanda handles boredom. You'll see how Adam jump-starts his thought processes, how Harry satisfies his need to move without bothering his teacher, and how Darren aces his homework. In addition, you'll hear from parents and teachers about the amazing benefits of relatively simple adaptations in space, structure, rules, and expectations. You'll also explore myths and facts about ADHD and see how this condition affects motivation, activity level, attention, and memory. These lessons will arm you with powerful strategies you can put to use immediately in your own classroom. By the time you're done, you'll have the skills and knowledge you need to help students with ADHD compensate for their problems and achieve their full potential.

**EDU 7542. Teaching Adult Learners. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

Discover how to use the newest educational methods to create a student-centered classroom that's perfectly suited for adult learners. Explore the unique needs and motivations of adult students and find out just what they're expecting from your class. Examine your students' different learning styles and multiple intelligences and look at how you can teach to each learner's strengths. In addition, we'll look at how to create effective tests and how to teach your students good study skills. We'll also check out a wide range of assessments that will help you grade anything from a hairstyle to an ESL essay. And finally, we'll talk about making your classroom accessible and enjoyable for students with disabilities. If you're training to teach adults, the information and hands-on activities in this course will give you the confidence you need to succeed-and you'll know all the tricks and techniques for winning over this fun, exciting, and very demanding group of students.

**EDU 7543. Teaching High School Students. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

Learn about the latest teaching strategies and techniques that can help your secondary students achieve academically and behave responsibly. This course covers a broad range of topics, including differentiated instruction, classroom management and discipline, assessment strategies, and gaining parental support. We'll cover tips for creating need-fulfilling lessons that engage students, suggestions for using simulations and games that make learning enjoyable, and how to teach your students the social-emotional skills they need to succeed both in school and in life. You'll also learn how to motivate students with recognition, rewards, and reinforcement, how to deal with discipline problems, and the value of varying your assessment strategies.

**EDU 7544. Teaching Students With Learning Disabilities. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

Learn how to successfully meet the diverse needs of students with disabilities in your classroom from an experienced special educator. We'll dissect the whole special education process, from working with individualized education programs (IEPs) to helping students struggling with reading comprehension, math skills, and writing. We'll also talk about fun games you can incorporate, tips for modifying your classroom, and lots of tested methods for bringing out the best behavior in your students. Whether you're already in the classroom, studying for the Praxis Special Education exam, or getting ready to work with students in a variety of settings, this course will prepare you to understand and empower your kids with learning disabilities. In this course, you'll discover easy, practical, and creative strategies that will help your struggling students find their light bulb moments!.

**EDU 7545. The Creative Classroom. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

creativity will abound in your classroom as you tap your students' hidden talents. Learn how to use creativity to teach reading, writing, visual arts, performing arts, social studies, science, mathematics, and physical and health education. Develop creative new approaches to field trips, learning labs, activities, exercises, assignments, and evaluation methods. Think beyond the textbook and challenge your students by making your classroom a creative classroom!.

**EDU 7546. The Differentiated Instruction and Response to Intervention Connection. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

Today's teachers are using two powerful approaches-Differentiated Instruction (DI) and Response to Intervention (RTI)-to help every child succeed academically. In this course, you'll learn how to put this "dynamic duo" to work in your own classroom teaching and lesson plans. You'll start by exploring different learning styles and delving into a concept called multiple intelligences. In addition, you'll look at the factors that motivate students to learn in a child-centered classroom. After that, you'll master the basics of both DI and RTI and learn how these two approaches work hand-in-hand to enhance children's learning. You'll find out how to perform different types of assessments, monitor your students' progress, select research-based teaching materials, address learners' diverse needs, and move students up or down the RTI tiers so they're getting just the right help they need.

**EDU 7710. Exploring Nature: Get Children Excited About Science!. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

Exploring nature, is a hybrid course (online and hands-on), that provides an interdisciplinary experience for teachers, parents, and educators looking to infuse early childhood curriculum with environmental educational learning opportunities. On a Saturday, participants will explore science in nature through 15 outdoor learning experiences infused with math, music, reading, art and writing components. This course aligns with Project Learning Tree, a program of the National Forest Foundation. Participants will receive PLT's 100-page environmental experiences guidebook and teaching materials to use with their students or own children ages 2 to 8 years old. Future Exploring Nature courses will be offered seasonally every spring, summer and fall. This three-week hybrid course requires participants to engage in online content via Blackboard before the mandatory Saturday hands-on session, then complete several online assignments. Students are expected to spend 5 hours online and 5 hours in the Saturday workshop.

**EDU 7715. Exploring Digital Technologies to Enhance Teaching and Learning. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This fully online course provides hands-on digital technology experience for teachers, parents and educators looking to increase the use of digital and instructional technology as a tool to enrich student learning. Participants will explore and then practice using more than 20 technology-enhanced teaching and learning strategies, Web 2.0 tools and unconventional online assessments. This four-week (approx. 5 hours per week) fully online course requires participants engage in content and complete weekly assignments via Blackboard. \* This course meets NC DPI continuing license renew requirement: 2 credits Digital Learning Competencies.

**EDU 8000. Conflict, Bullies, and Just Plain Difficult Students. 0.0 Hours.** Class-50.0. Clinical-0.0. Lab-0.0. Work-0.0

This course will help teachers and classroom assistants learn to be more effective with all students. The course will focus on the role of teachers in dealing with difficult students, those students who challenge authority, and those who offer great challenge to the teaching environment. By understanding the issues surrounding these students, strategies can be developed for effectively working with them. Purchase book before class begins.

**EDU 8001. Nanny Training: Becoming an Effective Nanny. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

CPCC's nanny training prepares participants with the job skill sets based on recommended professional competencies.

**EDU 8002. Creating Math Activities with Children's Books. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This course prepares teachers in the early childhood classroom to use children's books as a creative way to engage children with early math concepts. The course includes setting up a classroom environment for positive learning experiences, choosing children's books and making math activities.

**EDU 8023. Learning Disabilities and ADHD. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This course will offer an introductory perspective on specific learning disabilities and attention deficit disorders. The class will explore the definition of a learning disability, the characteristics of ADHD, various areas of academic deficit and difficulty, and the lifelong nature of learning disabilities and attention deficit disorders. A brief overview of strategies for academic support and success will be offered. This introductory-level course is appropriate for educators and professionals instructing students in regular classrooms, persons supporting students in tutorial situations and other situations in which learning struggles are evident. "10 contact hours = 1 CEU" .

**EDU 8102. Exploring the Reggio Emilia Approach to Early Childhood Education: How Do I Begin?. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

Reggio Emilia is a city in northern Italy which is internationally known for its approach to early childhood education. In this class, students will explore the origin and features of the Reggio Emilia approach, with a focus on getting started with Reggio. Through online modules and discussion, students will explore the origin and philosophy of the approach, as well Reggio-inspired practices. Learning is enhanced through a mandatory field trip to a Reggio-inspired school and post-field trip reflections. This is CPCC's third continuing education class related to the Reggio Emilia approach. These classes are non-sequential; students do not have to have completed prior classes in order to register for this class.

**EDU 8103. Exploring the Reggio Emilia Approach to Early Childhood Education: Inquiry-Based Curriculum. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This is one of a series of four courses related to the Reggio Emilia approach. Other courses focus on Documentation, Image of the Child, and Getting Started with Reggio Emilia. These classes do not have to be taken in sequence. In this class, students explore the origin and features of the Reggio Emilia approach, with a focus on Inquiry-Based Curriculum. Students explore the philosophy as well as Reggio-inspired practices. Learning is enhanced through a mandatory field trip to a Reggio-inspired school and post-field trip reflections. Students will provide their own field trip transportation and should ask about the location before registering.

**EDU 8121. iTeach Drive in Conference. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

Dazed? Confused? Ever wonder what your students are talking about when they mention wiki's, iPods, YouTube, My Space, etc? Join us for a one day seminar exploring this, and go back to school and show them you are really cool! We will discuss "millennium" students, what they expect and how to meet their educational needs. As a bonus, we will provide a special presentation that showcases quick tips and tricks using Microsoft Office 2007.

**EDU 8122. Character Education With Kohlberg and Piaget. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This course compares and contrasts the theories of Kohlberg and Piaget as they relate to character education.

**EDU 8351. GAMES Groups Applying Meaningful Engaging Skills. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

Natural learning develops through using games in classrooms. Games provide a foundation for developing social skills, enhancing academics, increasing attention, motor skills and emotional skills. Participants will experience numerous games and evaluate practical application and modifications need for implementation in their classroom. Purchase materials in class.

**EDU 8500. Teaching the Language Arts: Content And Strategies. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This course provides an opportunity for elementary and middle grade teachers to review and to extend their content knowledge of each of the six language areas that inform language arts instruction. Teachers will design and assess instructional models that represent effective strategies for integration within the language arts curriculum and across other content areas. Course content will also include the analysis of teacher-generated case studies and a survey of current research-based recommendations for integrative strategies that address the learning needs and styles of all students in culturally and linguistically diverse classrooms. Course content and objectives are aligned with national and state professional standards and guidelines for language arts and literacy instruction.

**EDU 8501. Teaching Informational Texts: Grades K-6. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

The focus of this course includes a survey of both current research and effective instructional practice in the area of content literacy for students in grades K-6. Participants will analyze, plan and evaluate a variety of reading and writing strategies that build on the relationship between a child's linguistic development and proficiency in content reading and writing. Course content also includes a review of classroom teaching vignettes that illustrate instructional modes such as practices for vocabulary development, inquiry and cueing strategies, student-generated study guides and content organization strategies. Course content is aligned with the North Carolina Standard Course of Study, International Reading Association and the National Council of Teachers of English.

**EDU 8502. Integrating Instruction in Science, Math, Technology, K-8. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

The focus of this course is to discuss and assess an integrated model for teaching science, math and technology in a cooperative learning environment. A crucial course component is the concept of the learner as actively connecting content knowledge and engaging in problem-solving across subject areas. Course content also includes a review and selection of technology resources that contribute to the development of critical, creative thinking strategies in science and math. Participants will have the opportunity to assess current classroom practice and to design integrated activities and curriculum materials that are aligned with the National Council of Teachers of Mathematics Standards and the National Science Education Standards.

**EDU 8503. Creativity and Learning: Methods and Techniques for Integrating the Arts in Curriculum. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This course explores the role of the arts in meaningful learning from pre-school to high school. Topic areas include an overview of the history of arts in education, connections between the arts and learning styles and methods and strategies for integrated drama, art, dance and music into the curriculum and a review of successful programs.

## Electrical (ELC)

**ELC 7131. DC & AC Circuit Analysis I. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This course introduces DC and AC electricity with an emphasis on circuit analysis, measurements, and operation of test equipment. Topics include DC and AC principles, circuit analysis laws and theorems, components, test equipment operation, circuit simulation, and other related topics.



## Electronics (ELN)

### **ELN 7104. Troubleshooting Programmable Logic Controllers. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This course will provide students with an introduction to the different series of Programmable Logic Controllers to include the following: learning programming functions, program preparation, saving programs, loading programs, and hands-on programming. Students will also learn to read ladder logic and how to install and troubleshoot the PLC's.

### **ELN 7133. Digital Electronics. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This course covers combinational and sequential logic circuits. Topics include number systems, Boolean algebra, logic families, medium scale integration (MSI) and large scale integration (LSI) circuits, analog to digital (ADC) and digital to analog (DAC) conversion, and other related topics. Upon completion, students should be able to construct, analyze, verify, and troubleshoot digital circuits using appropriate techniques and test equipment.

## Engineering (EGR)

### **EGR 7000. Introductions to Robotics. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This course is an overview of fundamentals of robotics. Topics include goal setting, ethics, safety, the engineering method and design process, written and oral communication, interpersonal and team building skills. Upon completion, students should be able to demonstrate understanding of the fundamentals of robotics by designing, constructing and testing a function robot. In addition, students should be able to work in a multi-discipline team for a common goal.

### **EGR 7001. Basic Robotics. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This course is an overview of the fundamentals of robotics. Topics include basic goal setting, ethics, basic safety, the engineering method and design process for basic design, written and oral communication, and interpersonal and team building skills. Upon completion, students should be able to demonstrate a basic understanding of the fundamentals of robotics by designing, constructing and testing a functional robot. In addition, students should be able to work in a multi-discipline team for a common goal.

### **EGR 7010. Engineering Summer Camp. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

The camp will introduce students to science and engineering concepts and principles. The camp will provide participants a clear understanding of how math, science and engineering converge and complement one another. Through "contextual learning" activities and projects participants will build, analyze, and test their own machines such as a quadcopter or 3D printer while learning fundamental concepts of electrical, mechanical, and computer engineering disciplines. This will instill confidence in students that their creativity can be used to develop useful products.

### **EGR 7011. Engineering Summer Camp: Build Your Own 3D Printer. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

The camp will introduce students to science and engineering concepts and principles. The camp will provide participants a clear understanding of how math, science and engineering converge and complement one another. Through "contextual learning" activities and projects participants will build, analyze, and test their own 3D printer while learning fundamental concepts of electrical, mechanical, and computer engineering disciplines. This will instill confidence in students that their creativity can be used to develop useful products.

### **EGR 7020. Workshop: Build Your Own Quadcopter. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

Construct your very own autonomous quadcopter! The workshop will introduce students to the world of quadcopters. Students work their own quadcopters in a friendly, cooperative, and open environment guided by the instructor. Whether you are taking your first steps into this world or have been flying for years. By the end of the workshop you can have your quadcopter built, calibrated and ready to fly. Welcome to the future come build and fly.

### **EGR 7022. Workshop: Build Your Own 3D Printer. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

Construct your very own 3D Printer! The workshop will introduce students to the world of 3D Printers. Students work their own 3D Printers in a friendly, cooperative, and open environment guided by the instructor. Whether you are taking your first steps into this world or have been building with 3D printers for years. Now take steps to build your own. By the end of the workshop you can have your 3D Printer built, calibrated and ready to 3D print your own creations and/or download others. Welcome to the future come build and print.

### **EGR 7023. AutoCAD 2D Training. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This course introduces the graphical tools for engineering and design communications. Emphasis is placed upon using multiple 2D tools within AutoCad to communicate engineering and design concepts.

### **EGR 7024. Application Software for Technicians. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This course introduces personal computer software and teaches students how to customize software for technical applications. Emphasis is placed on the use of common office applications software such as spreadsheets, word-processing, graphics and Internet access. Upon completion, students should be able to demonstrate competency in using applications software to solve technical problems and communicate the results in text and graphical formats.

### **EGR 8024. Application Software for Technicians. 0.0 Hours.** Class-90.0. Clinical-0.0. Lab-0.0. Work-0.0

This course introduces personal computer software and teaches students how to customize software for technical applications. Emphasis is placed on the use of common office applications software such as spreadsheets, word-processing, graphics and Internet access. Upon completion, students should be able to demonstrate competency in using applications software to solve technical problems and communicate the results in text and graphical formats.

## English (ENG)

**ENG 7090. Composition Strategies - Abridged. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

Fast Track ENG 7090 is a fast-paced, intensive abridgement of Composition Strategies in a standard instructor-student format. The prerequisite for the course is successful completion of ENG 080 or the appropriate placement-test score. After successful completion of the course, which includes a retaking of the Sentence-Skills placement test, a student may advance to ENG 111, provided that the additional prerequisite of RED 090 with a grade of "C" or higher or the appropriate Reading-Comprehension placement-test score has been met.

Prerequisites: Complete one of the following options:

- Take ENG 080
- Take ENG 085 ENG 085A

**ENG 7101. Easy English 1. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

Do you need to learn English-and learn it fast? Start with the basics and build your skills step-by-step. Learn the English you need for real-life situations including shopping for clothes and food, and job-hunting. Learn key words and phrases you can use at school or in social settings, and you'll know the right things to say in a medical emergency.

**ENG 7102. Easy English 2. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

Review some English basics and build grammar, vocabulary, and writing skills step-by-step as you go through the course. Improve your listening skills through audio and video activities. By the time you're done, you'll have the skills you need to speak intermediate-level English with confidence.

**ENG 7103. Easy English 3. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

Review intermediate skills and build additional skills while learning key words and phrases you can use in everyday and emergency situations. Develop strategies for reading comprehension and improve your listening skills through audio and video activities.

**ENG 7115. Write Your Life Story. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

If you've ever thought about writing your life story, now is the time. You will have the satisfaction of telling history your way. This course walks you step-by-step through the process of writing your life story. It's fun. It's exciting. It's a story only you can tell.

**ENG 7121. The Craft of Magazine Writing. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

Turn your dreams into bylines and help yourself to a bright future as a magazine writer. You'll learn plenty of powerful brainstorming techniques designed to almost write every article for you.

## English As a Foreign Language (EFL)

**EFL 8024. Academic ESL Communication I. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This course will provide instruction in integrated academic and professional language skills. Upon completion of the course, students should be able to complete specific listening, discussion, reading, and writing tasks at an intermediate level.

**EFL 8025. Academic ESL Communication II. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This course will provide instruction in integrated academic and professional language skills. Upon completion of the course, students should be able to complete specific listening, discussion, reading, and writing tasks at an intermediate level.

**EFL 8030. Practical English for Business Situations I. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This course will provide instruction in academic and professional language for non-native speakers of English. Emphasis is placed on development of integrated language use for English situations.

**EFL 8031. Practical English for Business Situations II. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This course will provide instruction in academic and professional language for non-native speakers of English. Emphasis is placed on development of integrated language use for English situations.

**EFL 8050. TOEFL Preparation I. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This course will provide instruction in academic skills for non-native speakers of English. Emphasis is placed on specific reading, writing, listening, and speaking skills needed for the TOEFL. This course is helpful for non-native English speakers who plan to take the TOEFL exam or who want to improve their academic English reading, writing, listening, speaking, and grammar skills.

**EFL 8051. TOEFL Preparation II. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This course will provide instruction in academic skills for non-native speakers of English. Emphasis is placed on specific reading, writing, listening, and speaking skills needed for the TOEFL. This course is helpful for non-native English speakers who plan to take the TOEFL exam or who want to improve their academic English reading, writing, listening, speaking, and grammar skills. Students do NOT need to take TOEFL Preparation I before taking this class.

**EFL 8055. Academic ESL Grammar for Communication I. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This course provides non-native speakers of English with a variety of basic grammatical concepts that enrich academic communication.

**EFL 8056. Academic ESL Grammar for Communication II. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This course provides high-intermediate non-native speakers of English with a knowledge of grammatical structures that improve academic communication.

**EFL 8060. Academic ESL Skills for the IELTS I. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This course will provide instruction in academic skills for non-native speakers of English. Emphasis is placed on specific reading, writing, listening, and speaking skills needed for the IELTS. The IELTS is the International English Language Testing System. Its purpose is to assess the English proficiency level of people who want to study or work in English-speaking environments.

**EFL 8061. Academic ESL Skills for the IELTS II. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This course will provide instruction in academic skills for non-native speakers of English. Emphasis is placed on specific reading, writing, listening, and speaking skills needed for the IELTS. The IELTS is the International English Language Testing System. Its purpose is to assess the English proficiency level of people who want to study or work in English-speaking environments.

## Environmental Science (ENV)

**ENV 7100. What's Your Carbon Footprint?. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

As the scientific community now agrees that global warming is taking place, the question arises as to what impact humans are having on this environmental change and the increase of CO<sub>2</sub> levels in the earth's atmosphere. Our "carbon footprint" is a measurable indication of our personal impact. The average consumer today may be overwhelmed with information but unsure as to how their personal choices contribute to the equation. This class will offer general discussions on CO<sub>2</sub>, the human factor, and how our daily choices directly and indirectly affect the environment.

**ENV 7101. Urban Ecosystems. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

Creating biodiversity begins with one yard - yours. Participants will learn how to provide the four elements of a wildlife habitat, food, water, shelter and places to raise young, using a variety of manmade and natural products. Topics covered include sustainable gardening, planting with native plants, soil and water stewardship, reducing lawn size and reducing chemical usage.

**ENV 7102. Sustainable Housing and Building Green: What Agents Should Know. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

Sustainable Housing and Building Green teaches students how to understand sustainability in homes, to recognize green features, to give clients information on green mortgages and to understand cost savings in tax breaks, rebates and incentives. This course is approved by the North Carolina Real Estate Commission (NCREC) for four hours of CE credit.

**ENV 7103. Greening the Home Step-By-Step on a Budget. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

Greening the Home teaches the student how to make cost effective, eco-friendly choices to improve the quality of the home environment. Students will be able to create a step-by-step plan within a budget for continuing this greening process in their own homes.

**ENV 7104. Consumer's Guide to Building a Green Home. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

There are many things you can do as an individual and as a family, when planning a new Green home, which will make an impact in reducing your new homes carbon footprint. The actual construction of homes tends to require a lot of energy and resources. By pre-planning the necessary steps in the process, typically at minimal to no cost beginning in the design stage, a homeowner can gain significant benefits to the 3 P's: People, Planet and Pocketbook. Start by getting your family on board with the idea, then your design and building team and the transition will be a lot easier and much more fun.

**ENV 7105. Worms In Your Garden: Home Vermicomposting. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

Participants will learn the huge benefits of composting with worms over regular garden composting. This method can be done indoors in a small apartment, condo, or where outdoor composting is not possible. Participants will each build a simple low maintenance worm composting bin that can be taken home and, with kitchen scraps and paper, used to produce free, earth friendly and superior plant fertilizer for home and garden use. Instructions will be given in the care and continuance of the bin and worms.

**ENV 7106. Ways to Live Greener at Home. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

Participants will learn about energy efficiency and effective ways to lessen impact on our environment, beginning with our own homes. We will address recycling beyond paper and plastic, saving energy at home through new technologies, ways to remodel homes to save energy and money, and what to look for in a contractor. We will discuss tax incentives available, different organizations that promote green living and building such as the LEED rating system, Energy-Star and others. Discussion will include what we need to do in our communities to update neighborhood association by-laws to allow some of these more efficient systems.

**ENV 7107. Home Energy Audits. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

You can easily conduct a home energy audit yourself. With a simple but diligent walk-through, you can spot many problems in any type of house. This class will teach you how and give you the tools you need.

**ENV 7108. Endangered Species of the Carolinas. 0.0 Hours.**

Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

In this course, students will learn the fundamentals the US Endangered Species Act of 1973, The North Carolina Endangered Species Act of 1976, and the South Carolina Nongame and Endangered Species Conservation Act of 1974. Students will explore the different ecosystems that allowed species to adapt to their environments. Topics include observation and identification of threatened and endangered species, along with coordination with local, state and federal agencies. Upon completion, students should be able to perform an endangered species survey.

**ENV 7110. Preparing for the Green Workforce. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This course provides the information and strategies for people looking for a new career in the green economy. This includes alternative energy, skilled trades, environmental health, sustainability professionals, engineering and much more. Topics include career choices, professional goals, CPCC Sustainable Technologies Degree, interest assessment. Upon completion, students should be able to clearly state their personal, academic, and professional goals and have a feasible plan of action to achieve those goals.

**ENV 7135. Environmental Bio Diesel Production. 0.0 Hours.**

Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

ENV 7135 provides a survey of the bio fuel industry and will cover biofuel production. This class is extremely relevant to students who want to make their own fuel, including the basic chemistry and time spent in the lab making and testing fuel. This class focuses primarily on biodiesel and straight vegetable oil use with a survey of other biofuels.

**ENV 7200. Solar Photovoltaics for the New Clean Energy Economy. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

Upon completion of this course the students shall understand the detailed functionality of Photovoltaic system components, and all common solar systems from straight water pumping to stand alone battery based systems, and grid tie PV with and without batteries. Students will be able to design and size these systems. They will see what is involved with interconnection to the utility. This course prepares students to enter the workforce as a valuable resource to a company.

**ENV 7201. Consumer's Guide to Solar Power for the Home. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This class is for the homeowner considering an investment in a solar electric system who wants to be well informed. You'll learn a lot about this topic and we'll help you understand the basics of how a solar electric system works, how to establish how many solar panels you'll need in your array and the approximate costs. We will discuss: photovoltaic (solar electric) technology, energy storage, energy efficiency, site requirements for PV, installation considerations, PV system sizing, PV system costs, rebates and tax incentives and working with an installer.

**ENV 8000. Common Sense Buildings. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

Common Sense Buildings is a one day workshop is an introduction to the key components of practical buildings and how those are best integrated into a holistic approach to construction. The course will cover the basic science behind building construction and performance. We will discuss effective building assemblies and sustainable green building best practices. Participants receive a certificate of completion at the end of the program that states professional licensure and eligibility requirements for the LEED Green Associate exam.

**ENV 8001. Selling Green Building without Greenwashing. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This half day workshop will share marketing strategies with its participants and assist them in developing their own strategies. Participants will learn the appropriate terminology and use of information related to the LEED rating system and green building in general. The course will explore modern forms of marketing such as social networking. Participants receive a certificate of completion at the end of the program that states professional licensure and eligibility requirements for the LEED Green Associate exam.

**ENV 8002. USGBC Core Concepts and Strategies. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This workshop is intended for anyone who wants more than a basic understanding of LEED, including those with a stake in their company's or community's building practices, those directly involved in green building projects, and those pursuing GBCI's LEED Green Associate credential. The workshop provides essential knowledge of sustainable building concepts that are fundamental to all LEED Rating Systems. It begins with an introduction to the benefits and integrative approach to green building, and a brief background on the U.S. Green Building Council and LEED, including basics of the building certification process. The core of the workshop presents LEED intents and concepts at the credit category level, across building types and rating systems, touching on strategies, synergies, and specific examples that are reinforced by real project cases. Key LEED metrics and LEED referenced standards are addressed throughout the workshop. Interactive activities within the course keep you engaged and reinforce what you've learned.

**ENV 8003. Green Associate Study Group. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

Designed for candidates seeking the USGBC Green Associate credential, this facilitated study group builds on core green building and LEED knowledge as outlined in the Green Associate Candidate Handbook. Instructor will facilitate preparation through engaged group and directed individual study. Participants receive a certificate of completion at the end of the program.

**ENV 8004. Physics of Green Building. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This one day workshop covers the science behind building and building performance. Participants will learn the concepts and interactions between air, moisture and heat transfer in buildings, all critical in the proper functionality of homes. Participants receive certificate of completion at the end of the program.

**ENV 8005. Residential Energy Efficiency Methods. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This one day workshop is an introduction to the key components of energy efficient buildings and how they are best integrated. Participants receive a certificate of completion at the end of the program.

**ENV 8006. Advanced Sustainable Building: Residential. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This one day workshop is intended to convey practical, effective green building strategies. Participants will learn green building details and strategies that emphasize durability, energy efficiency and other green building principles. Participants will learn how to design or build better, greener buildings. Participants receive a certificate of completion at the end of the program.

**ENV 8007. Green House Design and Construction. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This workshop is intended for professionals who are familiar with the basic concepts of the LEED for New Construction and Major Renovations Rating System, but new to implementing it on projects or looking to brush up on implementation best practices. It is appropriate for new LEED APs, as well as those pursuing GBCI's LEED AP Building Design + Construction credential.

**ENV 8008. LEED AP for Homes Study Group. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

Designed for candidates seeking the USGBC LEED AP Homes credential, this facilitated study group builds on core green building and LEED knowledge as outlined in the LEED AP Homes Candidate Handbook. Instructor will facilitate preparation through engaged group and directed individual study. Participants receive a certificate of completion at the end of the program.

**ENV 8100. Green Building Certifications. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This class provides an overview of Energy Star, LEED, Green Globes and Delos Well Building Challenge. Participants will gain knowledge to help them decide which certification program is the best fit for their company. The class will provide detailed instruction on setting up and maintaining an Energy Star profile for a property and how to apply that profile to other certifications including LEED and Green Globes. The class will provide an overview of different certifications available today and what the differences are between them. The class will also inform students on the future of Green building and what to expect in the next decade of building certifications.



**ENV 8500. Building Performance Institute (BPI) Building Analyst and Envelope Professional Combination Training and Certification. 0.0**

**Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This course combines BPI's Building Analyst and the advanced Envelope Professional training and certification in a single week. Building Analyst is an entry certification for becoming an energy auditor or trade professional, while Envelope Professional is a specialized certification for measuring shell performance and offering solutions. These two designations can qualify your organization for BPI Company Accreditation upon application to the Institute. Ability to perform basic math and geometry calculations (a math and geometry primer is available upon request). Experience in construction trades is helpful. Instructor recommends purchasing and reading Residential Energy by John Krigger and Chris Dorsi prior to class. Students are required to register for their field exams directly with Green Collar Crew, Inc. prior to class. Exams are scheduled on a first-registered first-served basis. Email Instructor at info@greencollarcrewus.com for more information.

**ENV 8700. Central Carolinas Master Naturalist Certification Program. 0.0**

**Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

The Central Carolinas Master Naturalist Program is a certification intended for lifelong learners, biology and science graduates, retirees, environmental science educators, advanced high school and home school students, as well as science teachers. This certification training course includes basic classroom and field instruction in natural history, conservation and management, teaching and research skills led by local experts.

**ENV 8701. National Wildlife Foundation Habitat Steward Training. 0.0**

**Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This is a National Wildlife Federation program which teaches the intricacies of creating wildlife habitats in backyards, schools, businesses and places of worship; soil and water conservation; legislative and environmental challenges in a specific area; native and invasive plants and their roles in the environment; and much more. You will learn a lifetime of conservation facts from a number of topic experts. This information will change the way you view the natural world and give you all the tools you need to make a real difference in your landscape and in shaping our community's future. Graduates will be asked to donate time to a special project in Charlotte, it's NWF Community Wildlife Habitat Certification.

**ENV 8725. Rain Garden Design for the Home Gardener. 0.0**

**Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

Enhance your home landscape while improving water quality in your community by installing a rain garden in your landscape. Rain gardens are landscape features that harvest rain, provide water for plants, and save landscape maintenance costs. This rain garden design course is directed to homeowners who enjoy being engaged in their own landscape design and maintenance. After completion of the course, a homeowner will be able to design and install a rain garden in their home landscape. Students will learn the major benefits and methods for design and installation Topics covered will be soils, soil amendments, mulches, inflow design, outflow design, proper sizing of a rain garden, plants best suited for a rain garden and maintenance of rain gardens. There will also be a brief overview of other ways to use stormwater or gray water in home landscapes such as rain barrels and cisterns, and outdoor gray water systems.

## Fire Protection (FIP)

**FIP 7120. Response to Hazardous Materials (Level I). 0.0**

**Hours.** Class-15.0. Clinical-0.0. Lab-0.0. Work-0.0

This course presents the awareness level material to the student. It is based on the NFPA 472 standard on hazardous materials.

**FIP 7124. Fire Fighter Recruit Training. 0.0**

**Hours.** Class-112.0. Clinical-0.0. Lab-0.0. Work-0.0

This course will meet the requirements to comply with the 1997 edition of NFPA 1403 Interior Live Burn Standard. The course will cover the 8 different subjects that are required for a firefighter to participate in a live fire training event.

**FIP 7125. Hazardous Materials Awareness & Terrorism Level I. 0.0**

**Hours.** Class-15.0. Clinical-0.0. Lab-0.0. Work-0.0

This course is an awareness course designed to cover basic response objectives expected of a person certified at the Awareness Level. Course topics include recognizing the presence of a hazardous material, isolating the area to protect the public and responders, and identifying the material using various methods available to a responder. The course will also include elements of terrorism and its potential impact and relationship to hazardous materials incidents. This course meets all the competencies required by OSHA 1910.120 and NFPA 472 1997 edition.

**FIP 7126. Sprinklers. 0.0**

**Hours.** Class-33.0. Clinical-0.0. Lab-0.0.

Work-0.0  
This course deals with the value of sprinkler systems, the identification and use of sprinkler systems and fire department support of automatic sprinkler systems. This course will also explain the value and benefits of residential Sprinkler systems.

**FIP 7127. Ventilation. 0.0**

**Hours.** Class-33.0. Clinical-0.0. Lab-0.0.

Work-0.0  
This course presents the firefighter candidate with the principles of ventilation, the types of ventilation and tools needed to perform ventilation to various types of roofs.

**FIP 7128. Ropes. 0.0**

**Hours.** Class-33.0. Clinical-0.0. Lab-0.0. Work-0.0

This course will allow firefighter candidates to demonstrate their ability to tie varied knots and hitches, and hoist an array of equipment and identify the proper use of rope for lifelines.

**FIP 7129. Vehicle Extrication. 0.0**

**Hours.** Class-33.0. Clinical-0.0. Lab-0.0. Work-0.0  
The firefighter candidate will be presented with design features, stabilization procedures, procedures for gaining access, hazards and disentanglement procedures, access and egress points and other hazards associated with extrication procedures. The student will be exposed to new technologies, construction, design, materials, crumple zones, bumper systems, air bags and side impact protection systems.

**FIP 7130. L/P Gas Emergencies. 0.0**

**Hours.** Class-33.0. Clinical-0.0. Lab-0.0. Work-0.0  
This course deals with the properties of liquified petroleum gasses, leak control procedures, and extinguishment of fires involving LPG. The student will become familiar with flammable ranges, vapor density and toxicity ranges of liquified petroleum gasses. The student will gain a working knowledge of the hazards and corrective procedures for handling incidents related to LPG and natural gas.

**FIP 7131. Salvage. 0.0**

**Hours.** Class-33.0. Clinical-0.0. Lab-0.0. Work-0.0  
This course will enable the firefighter candidate to demonstrate various folds, rolls, deployment of salvage covers, and the construction and use of water chutes and catch all. In addition, the course will cover the maintenance of and other uses for salvage covers.

**FIP 7132. Overhaul. 0.0**

**Hours.** Class-33.0. Clinical-0.0. Lab-0.0. Work-0.0  
The material presented in this course will deal with the purpose of overhaul, how to recognize the location of hidden fires and how to expose them, and present the duties of the firefighters left at the fire scene for security.

**FIP 7133. Personal Protective Equipment. 0.0 Hours.** Class-33.0. Clinical-0.0. Lab-0.0. Work-0.0

The firefighter candidate will be presented the function of each article of protective equipment, the leading causes of death of firefighters, and the hazardous environments requiring use of protective equipment. In addition, there is a great deal of information covering the SCBA and its use.

**FIP 7134. Emergency Vehicle Driver Safety. 0.0 Hours.** Class-33.0. Clinical-0.0. Lab-0.0. Work-0.0

The student will be presented minimum standards for persons who drive and operate emergency vehicles. Drivers license requirements for driving emergency vehicles will be covered. The student will be presented with vehicle weights, characteristics and dynamics as they relate to emergency vehicles. This course will involve extensive practical training which will be conducted under non-emergency conditions.

**FIP 7135. Portable Fire Extinguishers. 0.0 Hours.** Class-33.0. Clinical-0.0. Lab-0.0. Work-0.0

This course will present the firefighter candidate with the proper use of portable extinguishers and the demonstration of the actual extinguishment of a Class A and B fire.

**FIP 7136. Forcible Entry. 0.0 Hours.** Class-33.0. Clinical-0.0. Lab-0.0. Work-0.0

This course will enable firefighter candidates to demonstrate their ability to force entry into a structure using varied tools and the maintenance of this equipment.

**FIP 7137. Fire Service Ladders. 0.0 Hours.** Class-33.0. Clinical-0.0. Lab-0.0. Work-0.0

This course presents the firefighter candidate with the different types of ladders and the use of each of these ladders.

**FIP 7138. Fire Hose Practices. 0.0 Hours.** Class-33.0. Clinical-0.0. Lab-0.0. Work-0.0

This course will enable the firefighter candidate to demonstrate the use of hoses and nozzles, adaptors and appliances and the information needed to conduct an annual service test of fire hose.

**FIP 7139. Water Supplies. 0.0 Hours.** Class-33.0. Clinical-0.0. Lab-0.0. Work-0.0

The firefighter candidate will be presented material during this course that will enable him/her to demonstrate both forward and reverse hose lays from the use of a pressurized hydrant and the use of mobile water supplies.

**FIP 7140. Managing the MayDay. 0.0 Hours.** Class-33.0. Clinical-0.0. Lab-0.0. Work-0.0

This course will facilitate interaction between Incident Commanders and Telecommunicators, as well as lecture and discussion on how to successfully maintain command and control of a working incident while at the same time managing a May Day transmission on the fire ground. Course emphasis will be placed on the following: Incident command and control Incident accountability Rapid intervention team deployment Case studies both locally and nationally which address these type incidents.

**FIP 7141. Technology in the Fire Service. 0.0 Hours.** Class-33.0. Clinical-0.0. Lab-0.0. Work-0.0

This course will discuss the various developments and concepts as they apply to various types of technology for fire ground use. Thermal Imaging, Self Contained Breathing Apparatus, gas detection and other cutting edge technology will be discussed with an eye to what the future may hold.

**FIP 7142. Fire Behavior. 0.0 Hours.** Class-33.0. Clinical-0.0. Lab-0.0. Work-0.0

This course integrates a discussion of physical science in the context of combustion and fire dynamics. This knowledge will assist in interpreting what is observed on the fire ground and recognize potential hazards, and it provides a basis for understanding fire control and ventilation tactical operations. The student will also be exposed to basic concepts related to combustion and fire development in structures. The same scientific principles and physical laws apply equally to other types of fire situations.

**FIP 7143. Fire Prevention Standard Inspection Level I. 0.0 Hours.** Class-33.0. Clinical-0.0. Lab-0.0. Work-0.0

This course is designed to develop knowledge and skills for basic fire prevention code enforcement. This course follows the guidelines set by the North Carolina Code Officials Qualification Board. Lecture, demonstration, and skills evaluation are the principal methods of instruction. Specific training areas include: rules of building code enforcement, fire code as it relates to other building codes, use of the fire prevention code, and technical provisions. Prerequisite none.

**FIP 7144. Fire Prevention Standard Inspection Level II. 0.0 Hours.** Class-33.0. Clinical-0.0. Lab-0.0. Work-0.0

This course is designed to develop knowledge and skills for advanced fire prevention code enforcement. This course follows the guidelines set by the North Carolina Code Officials Qualification Board. Lecture, demonstration, and skills evaluation are the principal methods of instruction. Specific training areas include: rules of building code enforcement, fire code as it relates to other building codes, use of the fire prevention code, and technical provisions. Prerequisite: completion of Fire Prevention Level I or job experience approved by the qualification board.

**FIP 7145. Fire Prevention Standard Inspection Level III. 0.0 Hours.** Class-33.0. Clinical-0.0. Lab-0.0. Work-0.0

This course is designed to develop knowledge and skills for advanced fire prevention code enforcement. This course follows the guidelines set by the North Carolina Code Officials Qualification Board. Lecture, demonstration, and skills evaluation are the principal methods of instruction. Specific training areas include rules of building code enforcement, fire code as it relates to other building codes, use of fire prevention code, and technical provisions. Prerequisites: completion of Fire Prevention Level II or job experience approved by the qualification board.

**FIP 7146. Leadership I - Strategies for Company Success. 0.0 Hours.** Class-13.0. Clinical-0.0. Lab-0.0. Work-0.0

This course is designed to meet the needs of the company officer, this course of leadership provides the participant with basic skills and tools needed to perform effectively as a leader in the fire service environment. This course addresses ethics, use and abuse of power at the company officer level, creativity in the fire service environment, and managing the multiple roles of the company officer.

**FIP 7148. Leadership III - Strategies for Supervisory Success. 0.0 Hours.** Class-13.0. Clinical-0.0. Lab-0.0. Work-0.0

This course provides the Company Officer with the basic leadership skills and tools to perform effectively in the fire service environment. The course covers when and how to delegate to subordinates, assess personal leadership styles through situational leadership, discipline subordinates, and apply coaching/ motivating techniques.

**FIP 7149. Swift Water Rescue Technician - Advanced. 0.0 Hours.**

Class-33.0. Clinical-0.0. Lab-0.0. Work-0.0

This course integrates techniques learned in SRT-I, taking the students beyond the emphasis on self-rescue to concentrate on victim rescue. This course includes classroom instruction, followed by extensive hands-on skill development. Topics covered will include: Understanding the role and utilization of various line systems, to search class I to Class III swift water, and in some instances, class IV to VI (hydraulics and waterfalls). Managing the raising and lowering of litters with patients, tending a litter, belaying of rescuers, basic rappelling, and high line systems. Managing and conducting a night or low visibility river rescue.

**FIP 7150. Leadership & Team Building. 0.0 Hours. Class-33.0.**

Clinical-0.0. Lab-0.0. Work-0.0

This course presents the company officer with the basic leadership skills and tools needed to perform effectively in the fire service environment. This course includes techniques and approaches to problem-solving, ways to identify and assess the needs of the company officers subordinates, methods for running meeting effectively in the fire service environment, and decision making skills for the company officer. This course addresses ethics, use and abuse of power at the company officer level, creativity in the fire service environment, and management of the multiple roles of the company officer. The final element of this course covers when and how to delegate to subordinates, assess personal leadership styles through situational leadership, discipline subordinates, and apply coaching/motivating techniques.

**FIP 7151. Fire Management for New Officers. 0.0 Hours. Class-33.0.**

Clinical-0.0. Lab-0.0. Work-0.0

This course is designed to acquaint officer candidates with the many interpersonal and administrative duties of a company officer. Interpersonal topics covered include communications, public relations and education, and dealing with public inquiries and concerns. Emphasis is placed on human resources and the performance review and development process. Administrative topics covered include the Charlotte Fire Department Operations Manual, the Charlotte Fire Department Strategic Plan, the Charlotte Fire Department Annual Report, budget management, employee benefits, leave time, payroll, fire department information technology, computer-aided dispatch, and records management. Students will review basic code enforcement information and fire cause determination.

**FIP 7152. Firefighting Foam. 0.0 Hours. Class-33.0. Clinical-0.0.**

Lab-0.0. Work-0.0

This course is designed to cover the uses of firefighting foam. Firefighting foam can be used to fight multiple types of fires and to prevent the ignition of materials that could be involved in a fire. The student will be exposed to new types of foams and efficient systems for applying foam. Demonstrations will show the use in neutralizing hazardous materials and decontamination.

**FIP 7153. Radiation Preparedness and Response. 0.0 Hours.**

Class-33.0. Clinical-0.0. Lab-0.0. Work-0.0

This course will provide an overview of Radiological Emergency Preparedness for first responder agencies responding to a nuclear/radiological incident in Mecklenburg County. It will also cover ways to help manage when dealing with Weapons of Mass Destruction. Students will review various methods on detecting radiation, equipment used, decontamination procedures and overall safety working at radiological incidents. For fire personnel, this program will discuss response, operations and decontamination at radiological incidents. For law enforcement personnel, this program will discuss radiological awareness, traffic control points/security and decontamination procedures.

**FIP 7154. Public Safety Diver. 0.0 Hours. Class-60.0. Clinical-0.0.**

Lab-0.0. Work-0.0

Public Safety Diver (PSD) standardizes non-divers and open-water divers as PSDs. A PSD certification combines the fundamentals taught in an open-water class with an emphasis on the exacting skills required to successfully dive in a rescue/recovery operation. The Public Safety Diver programs meet or exceed all the requirements set forth by the Recreational Scuba Training Council. PSD students are taught basic skills, proper use of Scuba equipment & maintenance, dive related injuries, diving physics, physiology, and dive planning using the US Navy Dive Tables. All these topics are covered with classroom lecture, pool & open-water skill sessions. The student is required to pass a written final exam with a minimum score of 80%, the IADRS swims test - min score of 12, and successful completion of all scuba skills in an open-water environment.

**FIP 7155. Dive Rescue 1. 0.0 Hours. Class-24.0. Clinical-0.0. Lab-0.0.**

Work-0.0

Learn the fundamentals of dive operations from scene evaluation through incident debriefing. Public safety divers and surface-support personnel are prepared to respond effectively to a water-incident scene. Topics include: overview of public safety drowning accidents; selecting, training, and equipping dive teams; family media and other agencies relations; search pattern fundamentals; victim retrieval tactics; responding to vehicle accidents; accident scene documentation; and an introduction to specialized equipment. Programs are presented in a classroom, a pool, and at an open-water training site.

**FIP 7156. Water Rescue Equipment - Dry Suits. 0.0 Hours.**

Class-40.0. Clinical-0.0. Lab-0.0. Work-0.0

Dry Suit Diving addresses the proper precautions needed when diving in potentially hazardous conditions. Without proper protection from your potentially hazardous diving environment, your rescue/recovery operation may be hindered or halted. One of the first steps to preparing for contaminated water or ice diving is learning how to dive in a dry suit. Dry suit diving topics include: history of the dry suit, suit types, accessories, sizing, custom adjustments, emergency procedures, repairs, and maintenance.

**FIP 7161. Personal Protective Equipment/Search. 0.0 Hours.**

Class-33.0. Clinical-0.0. Lab-0.0. Work-0.0

The firefighter candidate will be presented the function of each article of protective clothing, leading causes of firefighter deaths and the hazardous environments requiring use of personal protective equipment, including training and use of self-contained breathing apparatus.

**FIP 7162. Ladders. 0.0 Hours. Class-33.0. Clinical-0.0. Lab-0.0. Work-0.0**

This course presents the firefighter candidate with the different types of ladders and the use of each ladder presented, including safety, standards, limitations and maintenance.

**FIP 7163. Hazardous Materials Meters 101. 0.0 Hours. Class-33.0.**

Clinical-0.0. Lab-0.0. Work-0.0

This course will cover various subjects as needed to provide annual upgrade and refresher training for personnel toward recertification for Hazardous Materials certification in North Carolina.

**FIP 7164. Physical Forces of Emergency Vehicles. 0.0 Hours.**

Class-33.0. Clinical-0.0. Lab-0.0. Work-0.0

The student will be presented with the minimum standards for persons who drive and operate emergency vehicles. Students will be presented with vehicle weights, characteristics, and dynamics.

**FIP 7165. Fire Chief 101. 0.0 Hours.** Class-12.0. Clinical-0.0. Lab-0.0. Work-0.0

This class will satisfy the 9s inspection criteria as specified by the North Carolina Administrative Code. The primary objective of the course is to inform current and future chief officers of the various aspects and complexities surrounding the operations and organization of North Carolina fire departments. Upon completion of the course students will be better equipped to meet the challenges of the chief officer position.

**FIP 7166. Fire Chief 101 Update. 0.0 Hours.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This is the current Chief 101 update course approved by the NC Fire and Rescue Commission to meet NC Administrative Code requirements for those who have previously taken the Chief 101 course. Course content, which is revised at least every five years, must align with the currently approved update course managed by the NC Department of Insurance Office of State Fire Marshal(OSFM), and instructors must be specifically approved. This is a NC Fire and Rescue Commission certification course; however, this course will not transfer electronically to OSFM. Per Commission rules, instructors will be responsible for submitting student information to OSFM directly.

**FIP 7167. Traffic Incident Management. 0.0 Hours.** Class-4.0. Clinical-0.0. Lab-0.0. Work-0.0

This course is designed to establish the foundation for and promote consistent training of all responders to achieve the three objectives of the Traffic Incident Management (TIM) National Unified Goal: responder safety, safety, quick clearance from incidents, and a prompt, reliable, interoperable communications. This course will familiarize fire and rescue personnel with the purpose of the Strategic Highway Research Program 2 (SHRP2) and the National (TIM) Responder Training Program and how it relates specifically to North Carolina. Participants will learn to recognize and identify the dangers encountered by emergency responders working in or near traffic.

**FIP 7168. Basic Ladder Company Operations. 0.0 Hours.** Class-33.0. Clinical-0.0. Lab-0.0. Work-0.0

This course is designed to reinforce and strengthen the existing skills of firefighters. This course covers functions and operations carried out by ladder companies. This course is designed to challenge department members to look outside the box and use different methods to improve efficiency and effectiveness.

**FIP 7169. Basic Engine Company Operations. 0.0 Hours.** Class-33.0. Clinical-0.0. Lab-0.0. Work-0.0

This course is designed to reinforce and strengthen the existing skills of firefighters. It covers functions and operations carried out by engine companies. This course is designed to challenge department members to think outside the box and use different methods to improve efficiency and effectiveness.

**FIP 7170. Fire Officer I. 0.0 Hours.** Class-36.0. Clinical-0.0. Lab-0.0. Work-0.0

This course covers the knowledge, skills, and requirements referenced in the National Fire Protection Association (NFPA) Standard 1021 for Fire Officer I training. Topics include officer roles and responsibilities, budgets, fire cause determination, inspections, education, leadership, management, public relations, and other requirements included in the NFPA standard. Upon completion, students should be able to demonstrate an understanding of relevant NFPA standards as required for State Fire Officer I-II certification. This is a NC Fire and Rescue Commission Certification.

**FIP 7171. Fire Officer II. 0.0 Hours.** Class-28.0. Clinical-0.0. Lab-0.0. Work-0.0

This course covers the knowledge, skills, and requirements referenced in the National Fire Protection Association (NFPA) Standard 1021 for Fire Officer II training. Topics include officer roles and responsibilities, budgets, fire cause determination, inspections, education, leadership, management, public relations, and other requirements included in the NFPA standard. Upon completion, students should be able to demonstrate an understanding of relevant NFPA standards as required for state Fire Officer I and II certification. This is a NC Fire and Rescue Commission certification course.

**FIP 7173. Fire Officer III. 0.0 Hours.** Class-80.0. Clinical-0.0. Lab-0.0. Work-0.0

This course will present the Fire Officer candidate with the knowledge, skills, and ability to satisfy the requirements of Chapter 6 of NFPA 1021: Standard for Fire Officer Professional Qualifications. This course is designed to meet the needs of an executive management position. The course involves study in the areas of human resource management, fire department administration, community relations, budget preparation, and records management.

**FIP 7176. Emergency Vehicle Operations. 0.0 Hours.** Class-33.0. Clinical-0.0. Lab-0.0. Work-0.0

The student will be presented with minimum standards for persons who drive and operate emergency vehicles. Drivers license requirements for driving emergency vehicles will be covered. The student will be presented with vehicle weights, characteristics and dynamics as they relate to emergency vehicles. This course will involve extensive practical training which will be conducted under non-emergency conditions.

**FIP 7177. Nuclear Awareness. 0.0 Hours.** Class-33.0. Clinical-0.0. Lab-0.0. Work-0.0

This course presents a WMD radiological/ nuclear overview for first responders and other personnel who, in the course of their normal duties, are likely to be the first to arrive of the scene of a radiological/ nuclear incident. It focuses on the basics of radiation, possible health effects, hazard identification, proper notification procedures and the radiological/ nuclear threat.

**FIP 7178. Fire Instructor -Level I. 0.0 Hours.** Class-26.0. Clinical-0.0. Lab-0.0. Work-0.0

This course covers the knowledge, skills, and abilities needed to train others in fire service operations. Topics include planning, presenting, and evaluating lesson plans, learning styles, use of media, communications, and other related topics. Upon completion, students should be able to meet the requirements of Fire Instructor Level I objectives from National Fire Protection Association (NFPA) 1041. This is a NC Fire and Rescue Commission certification course.

**FIP 7179. Fire Instructor II. 0.0 Hours.** Class-38.0. Clinical-0.0. Lab-0.0. Work-0.0

This course covers the knowledge, skills, and abilities needed to train others in fire service operations. Topics include planning, presenting, and evaluating lesson plans, learning styles, use of media, communication, and other related topics. Upon completion, students should be able to meet the requirements of the Fire Instructor Level II objectives from National Fire Protection Association (NFPA) 1041. This is a NC Fire and Rescue Commission certification course.



**FIP 7181. Communications Unit Leader. 0.0 Hours.** Class-33.0. Clinical-0.0. Lab-0.0. Work-0.0

This course is designed for all local, regional, tribal, and state/territory emergency response professionals and for support personnel with a communications background. It is designed to familiarize the professionals with the roles and responsibilities of a Communications Unit Leader. Under the NIMS-ICS structure the COM-L is the focal point within the Communications Unit. This course provides DHS approved and NIMS compliant instruction to ensure that every locality has trained personnel capable of coordinating on-scene emergency communications during a multi-jurisdictional response or planned event.

**FIP 7182. Communications Technician. 0.0 Hours.** Class-40.0. Clinical-0.0. Lab-0.0. Work-0.0

This course delivers introductory and refresher training for the ICS Communications Technician position. It introduces public safety professionals and support staff to various communications concepts and technologies. This includes state-of-the-art interoperable communications solutions, Land Mobile Radio communications, satellite, telephone, computer and data technologies used in incident response and planned events. This course addresses all responsibilities appropriate to a COM-T operating on a local, regional, tribal or state/territory level within the Incident Management Team.

**FIP 7183. Radio Operator/Telecommunicator Emergency Response Taskforce. 0.0 Hours.** Class-33.0. Clinical-0.0. Lab-0.0. Work-0.0

This course is designed for all local, regional, tribal, and state/territory emergency response professionals and for support personnel with a communications background. It is designed to familiarize the professionals with the roles and responsibilities of a Radio Operator and Emergency Response Telecommunicator. This class will provide students with the information and skills necessary complete the RADO position task book and provide RADO or TERT services on public safety events.

**FIP 7184. Health & Wellness. 0.0 Hours.** Class-8.0. Clinical-0.0. Lab-0.0. Work-0.0

This certification-related course will present the firefighter candidate with the knowledge, skills, and ability to satisfy the requirements of Chapter 5 & 6 of NFPA 1001; Standard For Firefighter Professional Qualifications. This course is designed to educate first responders on the importance of maintaining high levels of fitness and wellness in order to perform their assigned duties efficiently and safely. This course is a part of the NC Firefighter Certification program approved by the NC Fire / Rescue Commission as of January 1, 2015.

**FIP 7185. Safety & Survival. 0.0 Hours.** Class-16.0. Clinical-0.0. Lab-0.0. Work-0.0

This certification related course presents the firefighter candidate with the knowledge, skills, and ability to satisfy the requirements of chapter 5 & 6 of NFPA 1001; Standard for Firefighter Professional Qualifications.

**FIP 7186. Mayday. 0.0 Hours.** Class-8.0. Clinical-0.0. Lab-0.0. Work-0.0

This certification related course will present the firefighter candidate with the knowledge, skills, and ability to satisfy the requirements of chapter 5 & 6 of NFPA 1001; Standard for Firefighter Professional Qualifications.

**FIP 7187. Live Burn- Orientation and Preparation. 0.0 Hours.** Class-33.0. Clinical-0.0. Lab-0.0. Work-0.0

This course will familiarize the students with the live burn standard adopted by the N.C. Fire Rescue Commission. All areas of NFPA 1403 will be covered in this class. Pre-burn plans, water supplies, safety mandates, and the necessary documentation required to conducting live burns.

**FIP 7188. Forcible Entry for Law Enforcement Personnel. 0.0 Hours.** Class-33.0. Clinical-0.0. Lab-0.0. Work-0.0

This course will present the students with the knowledge, skills and ability to possess a basic understanding of Chapters 5 and 6 of NFPA 1001. The course is designed to teach the students different methods of performing Forcible Entry into structures using different principles and practices. This class is designed primarily for Law Enforcement Personnel and does not carry any type of certification.

**FIP 7189. Thermal Imaging Cameras. 0.0 Hours.** Class-33.0. Clinical-0.0. Lab-0.0. Work-0.0

This class will cover Thermal Imaging technology, operational terms, uses, and limitations, as well as hands on training designed to present the student with opportunities to learn how to use thermal imagers on a variety of emergency situations.

**FIP 7190. NC Fire Prevention School - Basic. 0.0 Hours.** Class-33.0. Clinical-0.0. Lab-0.0. Work-0.0

This course will offer general information on the survival of a fire inspection. Course work includes building construction, using the fire codes with other codes, electrical hazards, flammable and combustible liquids and other general precautions. Upon completion the novice inspector or the experienced inspector will have updated their fire prevention information.

**FIP 7191. NC Fire Prevention School- Intermediate. 0.0 Hours.** Class-33.0. Clinical-0.0. Lab-0.0. Work-0.0

This course will offer the student a mixture of general and technical information. Course work includes information from the code and will address materials used daily by the inspector. Topics include: Fire protection systems, Means of egress, Fire alarm systems, Application of flammable finishes, Emergency planning. Upon completion of the course the student will have updated fire prevention material and information. Prerequisites: Take FIP 7190 Minimum grade S

**FIP 7194. Ventilation Practices. 0.0 Hours.** Class-33.0. Clinical-0.0. Lab-0.0. Work-0.0

This course presents the students with the principles of ventilation, the types of ventilation and tools needed to perform to various roof types.

**FIP 7195. Chief Fire Officer - Exec. Development - Level I. 0.0 Hours.** Class-33.0. Clinical-0.0. Lab-0.0. Work-0.0

This course provides an educational experience that helps Chief Officers and prospective Chief Officers recognize what effective leadership is, understand the difference between leadership styles, and develop the skills required to select the most appropriate style for them and the situation. In addition to a pre-course assignment that must be completed prior to the first day of class, the course consists of lectures and group activities.

**FIP 7196. Chief Officer - Exec. Development - Level II. 0.0 Hours.** Class-33.0. Clinical-0.0. Lab-0.0. Work-0.0

This course defines situational awareness and its implications on the emergency scene. The challenges of transforming from mid-level supervisor to an executive officer will be explained. Multi-Generational management will be explained with strategies to address management of each generational workforce sector.

**FIP 7197. Forcible Entry Practices. 0.0 Hours.** Class-33.0. Clinical-0.0. Lab-0.0. Work-0.0

This course will enable the students to explain different methods of forcing entry into a building and the tools necessary to perform the task.

**FIP 7198. Preparation for Initial Company Operations. 0.0 Hours.**

Class-13.0. Clinical-0.0. Lab-0.0. Work-0.0

This course is designed for company officers, acting company officers, or senior firefighters responsible for the management of a single fire company on a relief basis. This course will develop better understanding of the roles and responsibilities needed to prepare a fire company incident operations. The course will also expand upon the responsibilities for company readiness, personnel safety, and leadership as it relates to company operation.

**FIP 7199. Strategy and Tactics for Initial Company Operations. 0.0 Hours.**

Class-13.0. Clinical-0.0. Lab-0.0. Work-0.0

This course is designed to develop the management skills needed to define and accomplish tactics at structure fires by company officers, acting company officers, or senior firefighters who command a fire company on a relief basis. Students completing this course will be able to make use of the Communications Model and the Quick Access Pre-fire Plan in tactical incidents. Among the many topics presented during the course, the relationship between incident priorities, strategy, tactics and implementation will be discussed relating to the command sequence. Consideration of risk versus benefit, and the use of the Tactical Action Model based on incident assessment will be accomplished through the use of many table-top presentations.

**FIP 7204. Fire Behavior (Level II). 0.0 Hours.**

Class-4.0. Clinical-0.0. Lab-0.0. Work-0.0

Enable the firefighter candidate to demonstrate his/Her knowledge in the terminology used in the area of fire behavior, the hazards of different fuels and the types of heat sources.

**FIP 7211. Rescue (Level II). 0.0 Hours.**

Class-15.0. Clinical-0.0. Lab-0.0. Work-0.0

Will present the firefighter candidate with techniques and safety procedures to be used during a number of rescue activities and the proper use of rescue tools and the extrication of entrapped victims from motor vehicles.

**FIP 7212. Rescue. 0.0 Hours.**

Class-15.0. Clinical-0.0. Lab-0.0. Work-0.0

This course will present the firefighter candidate with techniques and safety procedures to be used during a number of rescue activities and the proper use of rescue tools and the extrication of entrapped victims from motor vehicles.

**FIP 7226. NC Association of Fire Chiefs- Training Manager Program.**

0.0 Hours. Class-33.0. Clinical-0.0. Lab-0.0. Work-0.0

This course targets those individuals who have leadership, management, and supervisory responsibility for the organization's training function. Topics addressed in the program are: managing delivery, design and development, program evaluation, financial management, legal issues and risk management, personnel management, training facility design, maintenance, planning, alternative learning, external relations, and strategic leadership in training.

**FIP 7278. Engine Company Operations. 0.0 Hours.**

Class-33.0. Clinical-0.0. Lab-0.0. Work-0.0

This course is designed to reinforce and strengthen the existing skills of firefighters. The curriculum consist of three sections which will cover operations carried out by engine companies, hose deployment, and fire attack. This course is designed to challenge members to look "outside the box" and use different methods to improve efficiency and effectiveness.

**FIP 7279. Ladder Company Operations. 0.0 Hours.**

Class-33.0. Clinical-0.0. Lab-0.0. Work-0.0

This course is designed to reinforce and strengthen the existing skills of firefighters. The curriculum consist of five sections which cover operations carried out by ladder companies within the department. The course is also designed to challenge department members to look outside the box and use different methods to improve efficiency and effectiveness.

**FIP 7300. Fire Fighter I & II (Level I & II). 0.0 Hours.**

Class-500.0. Clinical-0.0. Lab-0.0. Work-0.0

**FIP 7303. Fire Alarms & Communications. 0.0 Hours.**

Class-16.0. Clinical-0.0. Lab-0.0. Work-0.0

This course will allow for the student to complete objectives related to fire alarms and communications for Firefighter Certification.

**FIP 7304. Fire Behavior. 0.0 Hours.**

Class-12.0. Clinical-0.0. Lab-0.0. Work-0.0

This course will allow the student to complete the objectives related to fire behavior for Firefighter Certification.

**FIP 7305. Portable Extinguishers. 0.0 Hours.**

Class-8.0. Clinical-0.0. Lab-0.0. Work-0.0

This course will allow the student to complete the objectives related to portable fire extinguishers for Firefighter Certification.

**FIP 7306. Personal Protective Equipment. 0.0 Hours.**

Class-20.0. Clinical-0.0. Lab-0.0. Work-0.0

This course will allow the student to complete the objectives related to personal protective equipment for Firefighter Certification.

**FIP 7307. Forcible Entry. 0.0 Hours.**

Class-12.0. Clinical-0.0. Lab-0.0. Work-0.0

This course will cover all the related objectives to the subject of forcible entry for Firefighter Certification.

**FIP 7308. Ventilation I & II (Level I & II). 0.0 Hours.**

Class-20.0. Clinical-0.0. Lab-0.0. Work-0.0

This course will present the firefighter candidate with the principles of ventilation, types of ventilation and tools needed to perform ventilation. Student will be shown automatic ventilation devices, methods for ventilating basements, the use of forced ventilation, and considerations that must be made when ventilating a structure.

**FIP 7309. Ropes. 0.0 Hours.**

Class-12.0. Clinical-0.0. Lab-0.0. Work-0.0

This course will allow the student to complete all objectives relative to ropes for Firefighter Certification.

**FIP 7310. Ladders. 0.0 Hours.**

Class-16.0. Clinical-0.0. Lab-0.0. Work-0.0

This course will allow the student to complete the related objectives for ladders for Firefighter Certification.

**FIP 7311. Fire Hose, Streams & Appliances. 0.0 Hours.**

Class-20.0. Clinical-0.0. Lab-0.0. Work-0.0

This course will train the student in all objectives related to fire hose, appliances, and streams in compliance with Firefighter Certification.

**FIP 7312. Foam Fire Streams. 0.0 Hours.**

Class-8.0. Clinical-0.0. Lab-0.0. Work-0.0

This course will detail all objective related to use of foam as it relates to fire streams for Firefighter Certification.

**FIP 7313. Fire Control. 0.0 Hours.**

Class-36.0. Clinical-0.0. Lab-0.0. Work-0.0

This course will cover all objectives related to Fire control for Firefighter Certification.

**FIP 7314. Loss Control. 0.0 Hours.** Class-16.0. Clinical-0.0. Lab-0.0. Work-0.0

This course will cover objectives related to Salvage and Overhaul for Firefighter Certification.

**FIP 7317. Rescue. 0.0 Hours.** Class-20.0. Clinical-0.0. Lab-0.0. Work-0.0

This course will cover the objectives related to rescue as it pertains to Firefighter Levels Certification.

**FIP 7319. Sprinklers. 0.0 Hours.** Class-16.0. Clinical-0.0. Lab-0.0. Work-0.0

This course will train students in all objectives related to sprinkles for Firefighter Certification.

**FIP 7320. Response to Hazardous Materials (Level I & II). 0.0 Hours.** Class-36.0. Clinical-0.0. Lab-0.0. Work-0.0

Response to hazardous materials - awareness/Operation this course will cover all objectives related to the awareness and operations level for both firefighter I and II levels.

**FIP 7321. Fire & Life Safety Preparedness. 0.0 Hours.** Class-12.0. Clinical-0.0. Lab-0.0. Work-0.0

This course will cover all objectives related to fire prevention, fire hazards, fire inspections and fire prevention education for NC Firefighter Certification.

**FIP 7322. Building Construction. 0.0 Hours.** Class-16.0. Clinical-0.0. Lab-0.0. Work-0.0

This course will cover all objectives related to building construction as related to Firefighter Certification.

**FIP 7323. Fire Department Orientation II). 0.0 Hours.** Class-16.0. Clinical-0.0. Lab-0.0. Work-0.0

This course will enable the firefighter to become aware of the basic and advanced operations of the department and understand their position in the organization from a basic and advanced detailed perspective. Course topics will also include the review of basic and advanced safety regulations and the firefighter responsibility to comply with those regulations, the review of the elements of a basic and advanced departmental safety program and a review of the basic and advanced hazards related to fire protection.

**FIP 7324. Water Supplies. 0.0 Hours.** Class-20.0. Clinical-0.0. Lab-0.0. Work-0.0

This course meets all requirements for Firefighter Certification for water supplies objectives.

**FIP 7325. Hazardous Materials Awareness/ Operations & Terrorism (Level I & II). 0.0 Hours.** Class-36.0. Clinical-0.0. Lab-0.0. Work-0.0

This course combines both the Haz Mat Awareness and the Operations into one program. Course topics include recognition, isolation, identification, and various defensive control options available to the Haz Mat Operations level responder. The course also includes elements of terrorism and its potential impact and relationship to a hazardous materials incident. This class meets all the competencies required by OSHA 1910.120 and NFPA 472 2008 edition.

**FIP 7401. Firefighter Recertification. 0.0 Hours.** Class-30.0. Clinical-0.0. Lab-0.0. Work-0.0

This course provides students with information and training on a variety of basic subjects related to Firefighter I and II. This material will go towards meeting the annual requirement of a minimum of 30 hours of standard based training.

**FIP 7402. FireFighter Cadet Training Program. 0.0 Hours.** Class-500.0. Clinical-0.0. Lab-0.0. Work-0.0

This course will enable the firefighter to become FFI and FFII certified according to the North Carolina State Fire and Rescue Commission. This course will cover all topics in the certification.

**FIP 7403. Strategy & Tactics. 0.0 Hours.** Class-33.0. Clinical-0.0. Lab-0.0. Work-0.0

This course is designed to help officers think at emergency scenes so that they can more readily and accurately contend with the two main questions frequently confronting them. What is the problem and how is the problem solved.

**FIP 7404. Urban Search and Rescue - Indoctrination. 0.0 Hours.** Class-33.0. Clinical-0.0. Lab-0.0. Work-0.0

This course will introduce the first responder to different methods used in locating and extricating victims from structural collapse due to natural or terrorist acts.

**FIP 7406. Fire Service Advanced Saw Operations. 0.0 Hours.** Class-33.0. Clinical-0.0. Lab-0.0. Work-0.0

Increasingly Fire Departments are being called to assist in storm damage that results in trees being down in various circumstances. This hands on course will explore the many different considerations as they relate to removing trees from houses where victims may be trapped, trees fallen on vehicles, and other similar scenarios.

**FIP 7407. Hands On Training- Forcible Entry. 0.0 Hours.** Class-33.0. Clinical-0.0. Lab-0.0. Work-0.0

This course will provide the students with hands on training in a variety of forcible entry problems to include conventional forcible entry on inward and outward opening doors on both training props and acquired structures. Students will get hands on training on through-the-lock techniques and problems encountered in commercial structures.

**FIP 7408. North Carolina Response Rating System. 0.0 Hours.** Class-33.0. Clinical-0.0. Lab-0.0. Work-0.0

This course will review the latest information and factors that go into the make-up of the public protection rating of cities and fire districts. The system continues to evaluate three major categories of fire suppression; Fire Department, Emergency Communications, and Water Supply. The course also includes the Community Risk Section that recognizes community efforts to reduce losses through fire prevention, public fire safety, and fire investigation.

**FIP 7409. Line of Duty Death. 0.0 Hours.** Class-33.0. Clinical-0.0. Lab-0.0. Work-0.0

During this program the fire department members will discuss the Line Of Duty Death, what a department can expect after a LODD, and present how that department continues to recover. Actual video and audio will be presented during this class.

**FIP 7410. Live Fire Burn Liability. 0.0 Hours.** Class-33.0. Clinical-0.0. Lab-0.0. Work-0.0

This course will share a recent experience that a North Carolina Fire Department had regarding an OSHA decision on a live burn training exercise that will impact your training. Discussion of this topic will help Chiefs and Training Officers understand why it is important to follow the NFPA 1403 Standard for Live Fire Exercises, document training, and emphasize the importance of firefighter rehabilitation. Proposed changes to the NFPA 1403 standard will also be reviewed.

**FIP 7411. Qualification Indoctrination. 0.0 Hours.** Class-33.0. Clinical-0.0. Lab-0.0. Work-0.0

This course is designed to teach candidates seeking fire and rescue subject qualifications. This Course is required by the NC Fire and Rescue Commission to be completed prior to attending a NC Qualification Class. Topics will include NC Fire and Rescue Commission Policies and Procedures, Policy for Testing, Instructor Responsibilities, Delivery Agency Responsibilities, Instructor Consequences, OSFM Website Navigation, Accreditation, NFPA Standards, NC Lesson Plans, NC Practical Skills, and Testing Procedures for Written and Practical Testing.

**FIP 7412. Prioritizing The Fireground. 0.0 Hours.** Class-33.0. Clinical-0.0. Lab-0.0. Work-0.0

This course is designed to assist chief and line officers of volunteer, combination, and career fire departments to prioritize fireground tasks based on identifying rescue potential, the building, fire volume, equipment, and available personnel. Many times there are not enough firefighters at the beginning of the incident to accomplish all the necessary tasks on the fireground. Effectiveness is lost and firefighter safety is compromised because on scene personnel try to perform too many tasks rather than prioritize and complete them. The practices and concepts taught in this class are based on nationally recognized fireground priorities.

**FIP 7413. Elevator Emergencies. 0.0 Hours.** Class-33.0. Clinical-0.0. Lab-0.0. Work-0.0

This course is designed to give the first arriving responders the necessary skill set to handle most elevator emergencies. The course covers response, size-up, decision making (when to extricate/when to wait on a technician), and techniques for removing occupants from stalled elevators.

**FIP 7414. Estimating The Initial Hose Stretch. 0.0 Hours.** Class-33.0. Clinical-0.0. Lab-0.0. Work-0.0

This course will address pre-connected and made-up hose lines. Pre-connected lines, on occasion, are not long enough to reach the fire. It will address advancing hose lines across parking lots, through courtyards, and up stairways. It will show the importance of a correct estimation the first time, therefore eliminating the necessity of extending lines.

**FIP 7415. Alternative Fuel Vehicles. 0.0 Hours.** Class-33.0. Clinical-0.0. Lab-0.0. Work-0.0

This course will cover the various types of fuel used in motor vehicles. Fuels to be discussed are; gasoline, propane, natural gas, and electricity.

**FIP 7416. Rapid Intervention - Review. 0.0 Hours.** Class-33.0. Clinical-0.0. Lab-0.0. Work-0.0

This course will provide an in-depth review of Rapid Intervention. The Asheville Fire Department has conducted extensive studies into the mechanics of a firefighter down needing extrication. This program will review their findings and present solutions.

**FIP 7417. North Carolina State Firemen's Association- Updated. 0.0 Hours.** Class-33.0. Clinical-0.0. Lab-0.0. Work-0.0

This course will be a series of updates on issues affecting our programs and membership. Included in the discussions will be: changes in legislation, changes to the Firefighter's Relief Fund; new programs and or benefits as well as any changes in benefits; future changes that may be coming that involves the membership.

**FIP 7418. A Profile of Today's Fire Service. 0.0 Hours.** Class-33.0. Clinical-0.0. Lab-0.0. Work-0.0

This course will show that your attitude has a profound impact on your life. Attitudes impact the success of organizations. This course combines a step up to leadership concept with the reality of what is really going on in your fire station.

**FIP 7420. New Company Officer. 0.0 Hours.** Class-33.0. Clinical-0.0. Lab-0.0. Work-0.0

This course will cover the multitude of challenges that the New Company Officer may face while leading firefighters. In many instances the new company officer is not given any formal leadership training and guidance to help them succeed. Lack of leadership results in dissension within the department and failure on the fireground. This course will provide the new company officer with tools and tips to assist them build and lead their firefighters to success both on and off the fireground.

**FIP 7421. Using Social Media. 0.0 Hours.** Class-33.0. Clinical-0.0. Lab-0.0. Work-0.0

This course partners a Fire Department Public Information Officer with a veteran News Reporter in a co-presentation and discussion on the importance of using social media to engage and inform your customers (residents, visitors, government leaders, and sister agencies) Using examples of real time posting and reporting; both experts will discuss the importance of keeping your audience via social media.

**FIP 7422. North Carolina State Firemen's Association 101. 0.0 Hours.** Class-33.0. Clinical-0.0. Lab-0.0. Work-0.0

This course is an overview of the requirements and benefits of being a member of the North Carolina State Firemen's Association. This course covers support, benefits, and advocacy. The requirements for membership and membership rosters will be discussed. Specific benefits for members will be discussed giving the students a full review of all that can be expected as a member of the association.

**FIP 7424. Hands On Training - Ventilation. 0.0 Hours.** Class-33.0. Clinical-0.0. Lab-0.0. Work-0.0

Hands On Ventilation will provide the students with hands on experience in residential ventilation tactics. This course is applicable for small and large fire departments. This course will give the confidence and tactical advantage needed to perform effective ventilation on the fire ground.

**FIP 7425. Fire Instructor - Level III. 0.0 Hours.** Class-33.0. Clinical-0.0. Lab-0.0. Work-0.0

This course is based on NFPA 1041, Standard for Fire Service Instructor Professional Qualifications, and may lead to IFSAC and Pro Board certifications. This course is intended for the instructor who is ready to assume a leadership role by moving into the upper management level of his/her department and wants to develop the knowledge and ability to develop comprehensive training curricula and programs for use by single or multiple organizations; conduct organized needs analysis; and develop training goals and implementation strategies.

**FIP 7426. All-Haz Logistic Section Chief. 0.0 Hours.** Class-32.0. Clinical-0.0. Lab-0.0. Work-0.0

This class helps attendees establish the essential core competencies required for performing the duties of the supply unit leader in an all-hazards incident. By requiring attendees to bring jurisdictional-specific information to the instruction, this course provides a realistic, hands-on approach to mastering the skills of an SPUL, organized by fundamental steps of the ordering process. Attendees identify information required for ordering, as well as complete required forms and documentation related to ordering, and anticipate ordering and supply needs for the incident. In addition to the ordering process, this course covers mobilization, setting up and managing the supply unit and demobilization.



**FIP 7427. All Hazards - Planning Section Chief. 0.0 Hours.** Class-32.0. Clinical-0.0. Lab-0.0. Work-0.0

This course is designed to provide local and state level emergency responders with a robust understanding of the duties, responsibilities, and capabilities of an effective Planning Section Chief on an all hazards incident management team. These responsibilities fall into two categories: 1) Managing the planning cycle; and 2) tracking resources and incident status. Exercises, simulations, discussions and a final exam enable students to process and apply new knowledge.

**FIP 7500. National Fire Academy Courses. 0.0 Hours.** Class-13.0. Clinical-0.0. Lab-0.0. Work-0.0

This is a series of course that have been developed by the national fire academy for delivery at the state and local fire academy. FIP 3500 should be used only if a fire academy course is not listed as a current course.

**FIP 7600. Driver Operator Speciality. 0.0 Hours.** Class-20.0. Clinical-0.0. Lab-0.0. Work-0.0

This collection of course will allow the individual to become certified in driver operation specialty.

**FIP 7601. Fire Apparatus: Emergency Vehicle Driver. 0.0 Hours.** Class-20.0. Clinical-0.0. Lab-0.0. Work-0.0

This course deals with the safe operation of emergency vehicles, driving skills, legal implications of emergency driving and departmental standard operating procedures. This course is one of three required for driver operator certification (need FIP 3602 & 3603).

**FIP 7621. Driver Operator-Basic Aerial Apparatus Operations. 0.0 Hours.** Class-15.0. Clinical-0.0. Lab-0.0. Work-0.0

This course will review the application and use of various types of aerials including articulating booms, telescoping booms, elevated platforms, and aerial ladders. It will detail tip loads and uses of master streams from aerial devices.

**FIP 7622. Driver Operator - Aerial Maintenance & Testing. 0.0 Hours.** Class-30.0. Clinical-0.0. Lab-0.0. Work-0.0

This course will detail all portions of preventative maintenance on aerial apparatus. It also covers proper record keeping procedures and the proper method to clean and maintain all equipment carried on aerial apparatus. Concepts covered include; inspection and preventive maintenance of aerial device components, identification of malfunction, documentation and record keeping, required tests and testing procedures for aerial devices.

**FIP 7623. Driver Operator/Introduction to Pumps. 0.0 Hours.** Class-15.0. Clinical-0.0. Lab-0.0. Work-0.0

This course will explain and identify job or individual requirements for pump operators and will detail safe operation of the vehicle. It will also detail the safe operation as well as the basic aspects of positive displacement and centrifugal pumps.

Prerequisites: take FIP 7601 minimum grade S

**FIP 7624. Driver Operator/Pump Maintenance & Testing. 0.0 Hours.** Class-24.0. Clinical-0.0. Lab-0.0. Work-0.0

This certification related course will detail all portions of preventative maintenance on various pumps. It will also cover proper recording, keeping procedures and the proper methods to clean and maintain nozzles, appliances, and SCBA equipment on a pumper. Concepts covered; inspection of engine, chassis, pump, and drive systems, preventive maintenance, operational testing and annual service testing procedures.

Prerequisites: take FIP 7601 minimum grade S

**FIP 7625. Driver Operator/Sprinklers & Sandpipes. 0.0 Hours.** Class-15.0. Clinical-0.0. Lab-0.0. Work-0.0

This course will discuss and detail operations regarding set up and supply operations for pump operations for sprinkler systems and wet and dry standpipe systems. It will include a review of control valves, pressure settings and operations procedures.

Prerequisites: take FIP 7601 minimum grade S

**FIP 7626. Driver Operator/ Pump Hydraulics. 0.0 Hours.** Class-15.0. Clinical-0.0. Lab-0.0. Work-0.0

This course will detail vacuum pressure, normal operating pressure, residual, head and static pressure as it relates to the operation of a fire pumper during emergency operation. It will describe factors related to friction loss and detail measures to reduce friction loss. It will also review nozzle reaction force and show methods to calculate this course. Finally, a review of mathematical calculations utilized in fire service hydraulics will be reviewed and discussed.

Prerequisites: take FIP 7601 minimum grade S

**FIP 7627. Driver Operator - Introduction to Fire Department Aerial Apparatus. 0.0 Hours.** Class-15.0. Clinical-0.0. Lab-0.0. Work-0.0

This course is designed to introduce personnel to various types of aerial fire apparatus and their applications to emergency operations. It will include job and individual performance issues; how to identify various types of aerial apparatus, features of the design and application of aerials and elevating platforms. It will also review unsafe acts as it relates to weather and terrain in placement and use of aerials. It will also review unsafe acts as it relates to driver operator errors.

**FIP 7700. Fire Officer Speciality I. 0.0 Hours.** Class-16.0. Clinical-0.0. Lab-0.0. Work-0.0

This is a specialty course for fire officers related to command, management, and supervision.

**FIP 7705. Fire Officer Qualification. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This course number may be used to report any occupational extension course that is funded with receipts, and that will not generate budget FTE.

**FIP 7802. Instructor (Level II). 0.0 Hours.** Class-16.0. Clinical-0.0. Lab-0.0. Work-0.0

This course will cover all aspect of the NFPA 1041 Level II standard. Upon successful completion, the student will be qualified to be a Level II fire instructor.

**FIP 7903. Industrial Fire Brigade: OSHA Comp. 0.0 Hours.** Class-40.0. Clinical-0.0. Lab-0.0. Work-0.0

This course will detail methods and procedures related to fire safety industry relative to osha standards.

**FIP 7910. Ventilation I&II. 0.0 Hours.** Class-33.0. Clinical-0.0. Lab-0.0. Work-0.0

This course presents the firefighter candidate with the principles of ventilation, the types of ventilation and tools needed to perform ventilation on various types of roofs.

**FIP 7911. Command and Control of Incident Operations. 0.0 Hours.** Class-33.0. Clinical-0.0. Lab-0.0. Work-0.0

This course will allow students to be exposed to new and emerging issues in fire and rescue as well as broaden your awareness of the Incident Command System. The student will be exposed to different techniques for containment and extinguishment of fires ranging from small residential structures to multioccupancy structures.

**FIP 8000. Wildlands Fire Protection Speciality. 0.0 Hours.** Class-40.0. Clinical-0.0. Lab-0.0. Work-0.0

This is a series of courses dealing with speciality training in wildland fire protection.

**FIP 8001. Wildland Fire Suppression. 0.0 Hours.** Class-13.0. Clinical-0.0. Lab-0.0. Work-0.0

Designed for the rural fire department firefighter as a supplement to their regular training program as outlined in n f pa pamphlet 1001. DESIGNED for both the firefighter with little experience and the firefighter with experience in wild- land fires, who are not fulltime wildland firefighters and are limited to small unit initial attack units.

**FIP 8004. Wildland/Urban Interface Fire Fighting. 0.0 Hours.** Class-28.0. Clinical-0.0. Lab-0.0. Work-0.0

This course will cover aspects related to the mix of structures and woodland and train rural fire personnel in methods and tactics related to fires in the interface.

**FIP 8104. Fire Behavior. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This course will allow the student to complete the objectives related to fire behavior for Firefighter I and II.

**FIP 8105. Mountain Rescue Unit V Portable Extinguishers (Level 1). 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

Will present the firefighter candidate with the proper use of portable extinguishers and the demonstration of the actual extinguishment of a Class A and B fire.

**FIP 8106. Water Rescue and Recovery. 0.0 Hours.** Class-24.0. Clinical-0.0. Lab-0.0. Work-0.0

This course will train personnel on methods and procedures used for rescue operations in various bodies of water. It will also detail methods of body recovery.

**FIP 8109. Water Rescue & Recovery. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This course will assist personnel on methods and procedures used for rescue operations in various bodies of water. It will also detail methods of body recovery.

**FIP 8112. Trench Rescue. 0.0 Hours.** Class-40.0. Clinical-0.0. Lab-0.0. Work-0.0

The course will train personnel in methods and operations related to trench collapses and rescue operations.

**FIP 8113. Confined Space. 0.0 Hours.** Class-32.0. Clinical-0.0. Lab-0.0. Work-0.0

This course will train personnel in methods and operations related to rescue in confined space situations. It will also cover OSHA related standards.

**FIP 8115. Agricultural Machinery Rescue. 0.0 Hours.** Class-24.0. Clinical-0.0. Lab-0.0. Work-0.0

**FIP 8116. Bus Rescue Operations. 0.0 Hours.** Class-16.0. Clinical-0.0. Lab-0.0. Work-0.0

**FIP 8117. Managing the Search Function. 0.0 Hours.** Class-40.0. Clinical-0.0. Lab-0.0. Work-0.0

**FIP 8123. Underwater Search and Recovery. 0.0 Hours.** Class-40.0. Clinical-0.0. Lab-0.0. Work-0.0

This course is designed to teach intermediate and advanced skills in underwater search and recovery. Participants will use SCUBA, SCUBA with surface communication and surface supplied air communication. Participants will work from a surface support boat and will be expected to work at varying water depths. Participants must be certified by a nationally recognized agency to the Advanced Open Water Level or above. The student must also request and complete the medical and liability release forms prior to participation. Required equipment: mask, fins, snorkel, wet suit, BCD, regulator with SBG, depth gauge, alternate air source, weights, dive knife, cylinder, minimum size 72 cu. ft.

**FIP 8124. Boat Water Rescue. 0.0 Hours.** Class-60.0. Clinical-0.0. Lab-0.0. Work-0.0

Water rescue boatcrew member will learn physical fitness and personnel survival equipment, seamanship (line handling) and ground tackle, underway operations and watches, personnel rescue and evacuation operations, basic piloting and navigation, boat communication, towing and assistance operations, firefighting operations, and first aid.

**FIP 8132. Aircraft Rescue: Medium to Large Fixed Wing. 0.0 Hours.** Class-13.0. Clinical-0.0. Lab-0.0. Work-0.0

**FIP 8136. Underwater Search & Rescue. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This course is designed to teach intermediate and advanced skills in underwater search and recovery. Participants will use SCUBA, SCUBA with surface communication and surface supplied air communication. Participants will work from a surface support boat and will be expected to work at varying water depths. Participants must be certified by a nationally recognized agency to the Advanced Open Water Level or above. The student must also request and complete the medical and liability release forms prior to participation. Required equipment: mask, fins, snorkel, wet suit, BCD, regulator with SBG, depth gauge, alternate air source, weights, dive knife, cylinder, minimum size 72 cu. ft.

**FIP 8137. Trench Rescue. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

The course will train personnel in methods and operations related to trench collapses and rescue operations.

**FIP 8138. Confined Space. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This course will train personnel in methods and operations related to rescue in confined space situations. It will also cover OSHA related standards.

**FIP 8139. Emergency Medical Care (Level I & II). 0.0 Hours.** Class-14.0. Clinical-0.0. Lab-0.0. Work-0.0

This course will train the student in the objectives related to emergency medical care for both Firefighter I and II levels.

**FIP 8143. Emergency Vehicle Driver Safety. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

The student will be presented minimum standards for persons who drive and operate emergency vehicles. Drivers license requirements for driving emergency vehicles will be covered. The student will be presented with vehicle weights, characteristics and dynamics as they relate to emergency vehicles. This course will involve extensive practical training which will be conducted under non-emergency conditions.

**FIP 8209. Clandestine Drug Labs and Fire Service. 0.0 Hours.** Class-13.0. Clinical-0.0. Lab-0.0. Work-0.0

This course offers firefighters and rescue personnel information necessary in the recognition, impact and response to situations involving clandestine drug labs and detonation of bombs. Class will include procedures for responding to incidents involving both clandestine drug labs and bombs.

**FIP 8214. Forcible Entry Tools. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

Enable the firefighter candidate to demonstrate their ability to force entry into a structure using varied tools and the maintenance of this equipment.

**FIP 8215. TR-Vehicle Rescue - Rescue Operations. 0.0 Hours.** Class-9.0. Clinical-0.0. Lab-0.0. Work-0.0

This certification-related course in rescue operations for vehicle rescue will present the Technical Rescuer (TR) with the hazards of vehicle rescue operations, ICS, access, disentanglement, extrication, and the post rescue phases of vehicle rescue. This course should be offered consistent with the most current NC Fire and Rescue Commission guidelines. Contact the Office of State Fire Marshal (OSFM) for details.

**FIP 8216. Tr - Vehicle Rescue - Vehicle Anatomy. 0.0 Hours.** Class-9.0. Clinical-0.0. Lab-0.0. Work-0.0

This certification-related course in vehicle anatomy and new technologies will present the Technical Rescuer (TR) with information on vehicle anatomy and will introduce new technologies in vehicle devices which present hazards for rescue personnel. Topics included in this course are vehicle construction, crumple zones, bumper systems, air bags, side-impact protection systems, new vehicle innovations, propulsion systems, passive safety systems, and active safety systems. Suggestions on how to cope with innovative vehicles to safely mitigate a modern vehicle rescue will also be discussed. This course should be offered consistent with the most current NC Fire and Rescue Commission guidelines. Contact the Office of State Fire Marshal (OSFM) for details. Reference: NFPA 1006 Chapter 10.

**FIP 8217. TR- Vehicle Rescue - Stabilization \ Ex. 0.0 Hours.** Class-12.0. Clinical-0.0. Lab-0.0. Work-0.0

This certification-related course in stabilization and extrication techniques will present the Technical Rescuer (TR) the steps to stabilize a vehicle on four wheels, a side-resting vehicle, and a roof-resting vehicle. The Technical Rescuer will also be introduced to procedures for the following: opening a jammed door using a hinge attack and latch attack, creating a third door, total door removal, sidewall removal, working with a collapsed roof, creating a roof flap, C-B-A roof pillar cut, procedures for total roof removal, truck tunneling, through the floor access, displacing a steering column, dash roll, removal and/or relocation of pedals, and removing and/or relocating seats. This course should be offered consistent with the most current NC Fire and Rescue Commission guidelines.

**FIP 8218. Tr- Vehicle Rescue - Large Vehicle Rescue. 0.0 Hours.** Class-6.0. Clinical-0.0. Lab-0.0. Work-0.0

This certification related course in large vehicle rescue will present the Technical Rescuer (TR) with the techniques required to mitigate large vehicle rescue incidents. The course will expose responders to scene hazards and scene stabilization techniques. This course should be offered consistent with the most current NC Fire and Rescue Commission guidelines.

**FIP 8219. TR - Vehicle Rescue - Victim Management. 0.0 Hours.** Class-12.0. Clinical-0.0. Lab-0.0. Work-0.0

This certification related course in victim management will present the Technical Rescuer (TR) with proper methods for the movement of patients from a hazardous situation while focusing on the safety and well-being of the patients and rescuers. Stabilizing the situation, gaining access, packaging, and removal of patients from vehicle rescue incidents will be emphasized in this course. This course should be offered consistent with the most current NC Fire and Rescue Commission guidelines.

**FIP 8304. Chief Officer Development: Fire Ops Target Hazards. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This course provides an educational experience that will help company officers or chief officers to apply techniques learned in Command and Control of Incident Operations, in controlling incidents involving target hazards in an urban Fire Department. The four-day session will utilize simulations exercises.

**FIP 8317. Company Officer I - Basic Company Officer. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

The Basic Company Officer course is designed to lay a foundation of understanding the basic functions and duties of the Company Officer. This session consists of three pre-course assignments which must be completed prior to the students arrival on the first day of class. The four day session consists of lecture and group activities addressing the following topics.

**FIP 8318. Company Officer II Advanced Company Officer. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

The Advanced Company Officer is designed to instruct Officer Candidates in the more challenging areas of company management. This session consists of 4 pre- course assignments which must be completed prior to the student's arrival on the first day of class. The four day session consists of lecture, group activities, and role playing exercises.

**FIP 8319. Company Officer III - Company Tng & Preparedness. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

The Company Training and Preparedness course is designed to instruct Officer candidates on the importance of company readiness and training at the company level. This session consists of 2 pre-course assignments which must be completed prior to the students arrival on the first day of class. This four day session consists of individual presentations, lecture and group activities.

**FIP 8320. Company Officer IV Firefighting Strategy & Tactics. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

The Firefighting Strategy and Tactics is designed to instruct Officer Candidates on sound emergency incident decision making and firefighting strategy and tactics. This session consists of two pre course assignments.

**FIP 8330. Building Construction. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This course covers the principles and practices related to various types of building construction, including residential and commercial, as impacted by fire conditions. Topics include types of construction and related elements, fire resistive aspects of construction materials, building codes, collapse and other related topics. Upon completion, students should be able to understand and recognize various types of construction and their positive or negative aspects as related to fire conditions, meeting NFPA 1021.

**FIP 8331. Fire Hose, Streams, Appliance and Foam. 0.0 Hours.**

Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This course presents the principles of fire streams, types, design, operation, nozzle pressures, effects, flow, open, close, adjust various nozzles, flow patterns, multiple fire attacks and capabilities. Deploy and operate various types of hose, connecting to various water supplies, including fire department pumpers, deploy various foam applications, clean, inspect and return hose to service, and perform hose testing procedures, including test results.

**FIP 8332. Fire Control. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0.

Work-0.0

This course presents the methods that firefighters most frequently use to attack and extinguish various types of fires. Fire suppression refers to all tactics and tasks performed on the fire scene to achieve extinguishment of fire, including wild fires, ground fires, structure fires, vehicle fires and gas or liquid fires. Upon completion of the course, the student should be able to identify various types of fire, deploy correct suppression methods and use tactics to achieve extinguishment.

**FIP 8351. Company Officer I - Basic Company Officer. 0.0 Hours.**

Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

The Basic Company Officer course is designed to lay a foundation of understanding the basic functions and duties of the Company Officer. The sessions consist of three pre-course assignments which must be completed prior to the student's arrival on the first day of class. The four day sessions consist of lecture and group activities. Upon completion of the course the successful student should be able to master basic fire company operations.

**FIP 8352. Company Officer II - Advanced Company Officer. 0.0 Hours.**

Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

The Advanced Company Officer course is designed to instruct Officer Candidates in the more challenging areas of company management. The sessions consist of four pre-course assignments which must be completed prior to the student's arrival on the first day of class. The four day class consists of lecture, group activities and role playing. Upon completion of the class the successful student should be able to master the more complex issues facing a Company Officer.

**FIP 8353. Company Officer III - Company Training and Readiness. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

The Company Officer and Preparedness course is designed to instruct Officer Candidates on the importance of company readiness and training at the Company level. The sessions consist of two pre-course assignments which must be completed prior to the student's arrival on the first day of class. The four day session consists of lecture, individual presentations and group activities. Upon completion of the course the successful student should be able to master company readiness issues.

**FIP 8354. Company Officer IV - Firefighting Strategy and Tactics. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

The Firefighting Strategy and Tactics course is designed to instruct Officer Candidates on sound emergency incident decision-making and firefighting strategy and tactics. This session consists of two pre-course assignments which must be completed prior to the student's arrival on the first day of class. The four day class consists of lecture group activities and emergency incident simulations.

**FIP 8361. Chief Officer Development I - Leadership. 0.0 Hours.**

Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This course provides an educational experience that helps Company Officers or Chief Officers to recognize what effective leadership is, understand the difference between leadership styles and develop skills required to select the most appropriate leadership style for given situations. In addition to pre-course assignments which must be completed to the student's arrival on the first day, the four day session consists of lecture and group activities.

**FIP 8362. Chief Officer II - Human Resource Development and Community Risk Reduction. 0.0 Hours.** Class-440.0. Clinical-0.0.

Lab-0.0. Work-0.0

This course is designed to aid the Chief Officer Candidate in developing skills and knowledge to effectively manage and develop the human resources in their command. Also, the Candidate will study ways of managing risk reduction responsibilities at the Battalion Chief level and its effect on the overall risk reduction mission of the Charlotte Fire Department. There are required pre-course assignments in addition to the four day classroom sessions, consisting of lecture, group activities and discussion. Upon completion of the course, the successful Chief Officer Candidate should be able to effectively manage both personnel and risks under their command.

**FIP 8363. Chief Officer III - Command and Control of Incident Operations. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This course is designed to prepare the Chief Officer Candidate to perform as the primary decision-maker at all types of emergency incidents. The candidate will focus on the application of the Incident Command System (ICS). The four day session will consist of lecture, group activities and incident simulations. Upon completion of the course, the candidate will be able to demonstrate the ability to successfully handle command and control of complex incidents.

**FIP 8364. Chief Officer IV - Fire Department Operations at Target Hazards. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

The Chief Officer IV course provides an educational experience that will help either Company Officers or Chief Officers to apply techniques learned in Command and Control of Incident Operations, FIP-8363. Objectives include controlling incidents involving target hazards in an urban setting. The four day course utilizes virtual simulations of various urban incidents. Upon completion of the course, the student should be able to master the necessary operations required for a successful outcome of complex incidents in the urban environment.

**FIP 8371. Apparatus and Hydraulics - Driver/ Operator Pumps. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

The Apparatus and Hydraulics-Driver/Operator Pumps course is designed to prepare the candidate to drive and operate fire apparatus during both emergency and non-emergency situations. The course seeks to establish a minimum level of skill and efficiency with apparatus handling and pump operation. Upon completion of the course the successful candidate should be able to demonstrate practical knowledge and application in driving a fire apparatus and establishing and maintaining various pumping operations.



**FIP 8372. Apparatus and Hydraulics - Driver/ Operator Aerial. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

The Apparatus and Hydraulics-Driver/Operator Aerial course is designed to prepare the candidate to drive and operate fire apparatus during both emergency and non-emergency situations. The course seeks to establish a minimum level of skill and efficiency with apparatus handling and aerial operation. Upon completion of the course the successful candidate should be able to demonstrate practical knowledge and application in driving a fire apparatus and effective aerial operation and placement.

**FIP 8380. Hazardous Materials Awareness, Operations and Terrorism. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

The Hazardous Materials (Hazmat) course is designed to give the candidate the knowledge needed to identify an incident involving hazardous materials and the skills required to perform limited hazardous materials response operations effectively and safely. The course also includes elements of terrorism and its relationship to a hazardous materials incident, including its potential impact to both the community and environment. Upon completion of the course the successful student should be able to identify and respond to a variety of incidents involving hazardous materials.

**FIP 8533. Nc Emergency Management Incident Command System. 0.0 Hours.** Class-24.0. Clinical-0.0. Lab-0.0. Work-0.0

The Emergency Management Incident Command System course is designed to provide the student with basic information about incident command systems consisting of primary functions, management by objectives, unity and chain of command, transfer of command, organizational flexibility, unified command, span of control, common terminology, personnel accountability, integrated communications, resource management and charting action plans.

**FIP 8535. Swift Water Rescue Technician - Unit I. 0.0 Hours.** Class-30.0. Clinical-0.0. Lab-0.0. Work-0.0

This course is an intensive 30-hour course, designed to cover fundamental water rescue information as well as technical rope applications. Certification will be given by Rescue 3 International and meets NFPA 1670. This course will be recognized by the NC Fire/Rescue Commission/ Office of State Fire Marshal toward Rescue Technician Certification, water rescue section, provided the test for Rescue Technician Water Rescue is given and passed.

**FIP 8550. Urban Search and Rescue. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This is a 100 hr. nationally recognized class for qualification Urban Search and Rescue to include but not limited to: search of live victims from collapsed buildings, trapped in automobiles, buses, high rise structures, and in residences. Participant skills to include the gaining of expertise in extrication, cribbing, stabilization and moving of large concrete debris using hand labor, using of specialized tools. Participants must be capable of using heavy tools and lifting heavy loads. They also must be able to don and wear personal protective clothing during simulated rescue training.

**FIP 8551. Urban Search and Rescue. 0.0 Hours.** Class-100.0. Clinical-0.0. Lab-0.0. Work-0.0

This course is designed to provide training in the skills and techniques required for Urban Search and Rescue (USAR). Course topics may include but are not limited to: search for live victims trapped in collapsed buildings, high rise structures and residences and in automobiles, buses and other vehicles. Participants will gain expertise in the skills required for use in extrication, cribbing, stabilization, moving large concrete debris using hand labor, and use of specialized tools. Participants must be capable of using heavy tools, lifting heavy loads and be able to don and wear personal protective clothing during simulated rescue training. Note: For this course to meet certification requirements it must be taught by FEMA qualified instructors.

**FIP 8552. Fire Department Orientation. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This course will enable the firefighter to become aware of the basic and advanced operations of the department and understand their position in the organization from a basic and advanced detailed perspective. Course topics will also include the review of basic and advanced safety regulations and the firefighter responsibility to comply with those regulations, the review of the elements of a basic and advanced departmental safety program and a review of the basic and advanced hazards related to fire protection.

**FIP 8554. Fire Behavior. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This course will allow the student to complete the objectives related to fire behavior for Firefighter I and II.

**FIP 8555. Portable Fire Extinguishers. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This course will present the firefighter candidate with the proper use of portable extinguishers and the demonstration of the actual extinguishment of a Class A and B fire.

**FIP 8556. Personal Protective Equipment. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

The firefighter candidate will be presented the function of each article of protective equipment, the leading causes of death of firefighters, and the hazardous environments requiring use of protective equipment. In addition, there is a great deal of information covering the SCBA and its use.

**FIP 8557. Forcible Entry. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This course will enable firefighter candidates to demonstrate their ability to force entry into a structure using varied tools and the maintenance of this equipment.

**FIP 8558. Ventilation. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This course will allow the student to complete all objectives relative to ventilation for Firefighter Levels I and II.

**FIP 8560. Ladders. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This course presents the firefighter candidate with the different types of ladders and the use of each of these ladders.

**FIP 8561. Fire Hose, Appliances and Streams. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This course will train the student in all objectives related to fire hose, appliances, and streams in compliance with Firefighter Levels I and II.

**FIP 8565. Overhaul. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This course will cover all objectives related to overhaul for Firefighter I and II.

**FIP 8568. Water Supplies. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This course meets all requirements for Firefighter Levels I and II for water supplies objectives.

**FIP 8572. Hazardous Materials Level One Responder. 0.0 Hours.** Class-38.0. Clinical-0.0. Lab-0.0. Work-0.0

This course meets OSFM's training requirement for the Hazardous Materials Level One Responder credential. Course content includes lecture and practice activities needed to perform the following tasks safely and efficiently. (1) implement SOP's in the current edition of the DOT - Emergency Response Guidebook. (2) Analyze a Hazardous Materials/ WMD incident. (3) Plan an initial response to a Hazardous Materials/ WMD incident. (4) Implement the planned response for a Hazardous Materials/ WMD incident. (5) Evaluate the progress of the action plan at a Hazardous Materials/ WMD incident. This is a NC Fire Rescue Commission Certification Course.

**FIP 8628. Rescue Equipment - Torches. 0.0 Hours.** Class-33.0. Clinical-0.0. Lab-0.0. Work-0.0

This course will allow the student to be exposed to both new and existing torches used in cutting and specialized rescue operations. Emerging new technology and techniques in the field of rescue cutting torch use will be discussed and displayed. Upon completion of the course the student should be able to identify and operate different types of rescue cutting torches to a high degree of proficiency as required in rescue operations.

**FIP 8701. Initial Airport Firefighter Training. 0.0 Hours.** Class-52.0. Clinical-0.0. Lab-0.0. Work-0.0

This program provides indepth aircraft rescue and firefighting training in preparation for assignment to an airport fire department. Program satisfies needs of far 139. 319.

**FIP 8705. Area Fire/Rescue School I. 0.0 Hours.** Class-16.0. Clinical-0.0. Lab-0.0. Work-0.0

This is a 2-day fire rescue course program for training at the area or regional level. Content varies according to local need and requests.

**FIP 8711. Self Contained Breathing Apparatus. 0.0 Hours.** Class-42.0. Clinical-0.0. Lab-0.0. Work-0.0

This is a specialist class designed to allow the student to be a specialist in the area of SCBA. This is an advanced course.

**FIP 8714. Live Structural Burn Training. 0.0 Hours.** Class-13.0. Clinical-0.0. Lab-0.0. Work-0.0

This class involves the student participating in a live burn of a structure for realistic fire service training. All training should be conducted in accordance with NFPA 1403.

**FIP 8715. First Responder (Medical) Certification. 0.0 Hours.** Class-54.0. Clinical-0.0. Lab-0.0. Work-0.0

This is an extensive course which allows for the fire department personnel to be qualified as a first responder. This course is approved by NC OEMS and the local county EMS director.

**FIP 8716. Telecommunicator Certification Training. 0.0 Hours.** Class-40.0. Clinical-0.0. Lab-0.0. Work-0.0

This is a course designed to train emergency dispatch person nel on proper methods and procedures to obtain certification as a telecommunicator.

**FIP 8717. Preparing for an ISO Inspection Fire Service. 0.0 Hours.** Class-13.0. Clinical-0.0. Lab-0.0. Work-0.0

This course will review all the factors in the ISO Public Protection. Rating for cities and fire districts. This course will allow you to improve the representation of the department for maximum credit, possibly lowering insurance premiums for property owners.

**FIP 8725. Mobile Water Supply I. 0.0 Hours.** Class-13.0. Clinical-0.0. Lab-0.0. Work-0.0

This course will detail all aspects of the provision of mobile water supply to rural fire departments.

**FIP 8727. Fire Operations and High Rise Buildings. 0.0 Hours.** Class-13.0. Clinical-0.0. Lab-0.0. Work-0.0

This course will review special problems and challenges encountered during high rise fire operations.

**FIP 8728. Special Topics: Fire and Rescue. 0.0 Hours.** Class-33.0. Clinical-0.0. Lab-0.0. Work-0.0

This course will allow students to be exposed to new and emerging issues in fire and rescue.

**FIP 8729. General Practices: Fire and Rescue. 0.0 Hours.** Class-13.0. Clinical-0.0. Lab-0.0. Work-0.0

This training will consist of general fire and rescue training dealing with basic fire and rescue principles of operations. This course would serve as introductory and/or refresher training. This course would not lead to any fire or rescue certification.

**FIP 8815. Technical Rescuer - General. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This course will present the Technical Rescuer with knowledge, skills and ability to perform rescues in various types of environments and implement technical rescue skills to effect a rescue. Topics include rescue situations in structural and wilderness settings. Upon completion of the course, successful students should be proficient in the operations necessary to mitigate various rescue scenarios.

**FIP 8816. Technical Rescuer - Vehicle and Machinery Rescue. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This course will present the Technical Rescuer with the knowledge, skills and ability to perform rescues in various types of environments and implement technical procedures to effect a rescue. Topics include types of entrapments, mechanisms of injury, potential hazards, successful strategies and firefighter safety. Upon completion of the course, successful students should be proficient in the operations necessary to mitigate various rescue scenarios.

**FIP 8817. Technical Rescuer-Ropes. 0.0 Hours.** Class-75.0. Clinical-0.0. Lab-0.0. Work-0.0

This course will present the Technical Rescuer with the knowledge, skills, and ability to satisfy the requirements of Chapter Six (Ropes) of NFPA 1006: Standard for Technical Rescue Professional Qualifications. Classes included in this course are: Rescue Operations for Rope, Anchors, Mechanical Advantage Systems, Fixed Rope Systems, Lower and Raises, High Lines, and Victim Management.

**FIP 8819. Technical Rescuer - Ropes. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This course will present the Technical Rescuer with knowledge, skills and ability to perform rescues in various types of environments and implement technical rescue procedures to effect a rescue. Topics include rescue operations, ropes, knots, anchors, raises and lowers, victim management and scene safety. Upon completion of the course, successful students should be proficient in the operations necessary to mitigate various rescue scenarios.

**FIP 8828. Flammable Liquid Fire Fighting. 0.0 Hours.** Class-13.0. Clinical-0.0. Lab-0.0. Work-0.0

This course deals with preparing the firefighter to respond and contain flammable liquid fires such as hydrocarbons.

**FIP 8831. Helicopter Landing Operations. 0.0 Hours.** Class-10.0. Clinical-0.0. Lab-0.0. Work-0.0

This course will train fire and rescue personnel in the proper methods and procedures to be used to properly support and conduct safe landings of helicopters for casualty evacuations, disaster flyovers, and emergency situations.

**FIP 8863. Wildland/Urban Interface Fire Protection. 0.0 Hours.** Class-20.0. Clinical-0.0. Lab-0.0. Work-0.0

This course exposes students to urban interface fire protection, fire organization and behavior, suppression methods, strategies and tactics, and safety concepts in forest fire suppression situations encountered by initial attack units.

**FIP 8893. TR- Ropes- Rescue Operations. 0.0 Hours.** Class-6.0. Clinical-0.0. Lab-0.0. Work-0.0

This class will present the Technical Rescuer with the requirements for pre-planning, scene size-up, and hazards assessment for incidents involving rope rescue. This class will also introduce the Technical Rescuer to applicable standards addressing rope rescue, PPE, accessory gear, rope software, and rope hardware. This is one of six courses that make up the NC Technical Rescuer Ropes Certification as outlined by the NC Fire and Rescue Commission. Reference: NFPA 1006 Chapter 6.

**FIP 8894. TR - Ropes- Anchors. 0.0 Hours.** Class-15.0. Clinical-0.0. Lab-0.0. Work-0.0

This class will present the Technical Rescuer correct techniques for the set-up, operation, and function of various multiple-point anchor and portable anchor/lifting platform systems used during rope rescue incidents. This is one of six courses that make up the NC Technical Rescuer Ropes Certification as outlined by the NC Fire and Rescue Commission. Reference: NFPA 1006 Chapter 6.

**FIP 8895. TR-Ropes- Mechanical Advantage. 0.0 Hours.** Class-6.0. Clinical-0.0. Lab-0.0. Work-0.0

This class will present the Technical Rescuer with the correct techniques for the set-up, operation, and function of compound mechanical advantage systems used during rope rescue incidents. This is one of six classes that make up the NC Technical Rescuer Ropes Certification as outlined by the NC Fire and Rescue Commission. Reference: NFPA 1006 Chapter 6.

**FIP 8896. TR- Ropes- Fixed Ropes Systems. 0.0 Hours.** Class-12.0. Clinical-0.0. Lab-0.0. Work-0.0

This class will present the Technical Rescuer with the correct techniques for the set-up, operation, and function of fixed rope systems used during rope rescue incidents. This is one of six courses that make up the NC Technical Rescuer Ropes Certification as outlined by the NC Fire and Rescue Commission. Reference: NFPA 1006 Chapter 6.

**FIP 8897. TR- Ropes- Lowers and Raises. 0.0 Hours.** Class-12.0. Clinical-0.0. Lab-0.0. Work-0.0

This class will present the Technical Rescuer with the correct techniques for the set-up, operation, and function of various types of high angle raising and lowering operations involving litters during a rope rescue incident. This is one of six courses that make up the NC Technical Rescuer Ropes Certification as outlined by the NC Fire and Rescue Commission. Reference NFPA 1006 Chapter 6.

**FIP 8898. TR- Ropes- Highlines. 0.0 Hours.** Class-9.0. Clinical-0.0. Lab-0.0. Work-0.0

This class will present the Technical Rescuer with the correct techniques for the set-up, operation, and function of highline systems for use at a rope rescue incident. This is one of six courses that make up the NC Technical Rescuer Ropes Certification as outlined by the NC Fire and Rescue Commission. Reference NFPA 1006 Chapter 6.

**FIP 8899. TR- Ropes- Victim Management. 0.0 Hours.** Class-15.0. Clinical-0.0. Lab-0.0. Work-0.0

This class will offer the Technical Rescuer practical applications for correctly gaining access to, stabilizing the environment, packaging and removing patients for a rope rescue incident. All the elements of anchors, fixed rope systems, lowers and raises and high lines are employed. This is one of six courses that make up the NC Technical Rescuer Ropes Certification as outlined by the NC Fire and Rescue Commission. Reference NFPA 1006 Chapter 6.

**FIP 8901. Hazardous Materials: Technician. 0.0 Hours.** Class-95.0. Clinical-0.0. Lab-0.0. Work-0.0

This is an advanced course that requires the student to be at operations level certification. The course will train the individuals to the technician level in compliance with NFPA 472 standards and the NC Fire and Rescue Commission.

**FIP 8903. Hazardous Materials: Recertification. 0.0 Hours.** Class-13.0. Clinical-0.0. Lab-0.0. Work-0.0

This course is an awareness course designed to cover basic response objectives expected of a person certified at the Awareness Level. Course topics include recognizing the presence of a hazardous material, isolating the area to protect the public and responders, and identifying the material using various methods available to a responder. This course will cover the MX6 air monitors as well as the MPX 6000 radios. The course will increase the awareness with detection and identification of equipment currently used by responders and go over correct procedures for atmospheric monitoring. This course meets all the competencies required by OSHA 1910.120 and NFPA 472 1997 edition.

**FIP 8904. Hazardous Materials: Lp & Comp Gases. 0.0 Hours.** Class-13.0. Clinical-0.0. Lab-0.0. Work-0.0

This course deals with methods and procedures to be used to handle and management & other compressed gas emergencies. This will provide students with hands-on experience and training in valves tanks, and other items. This course is not part of a certification program.

**FIP 8905. Hazardous Materials: Chemistry. 0.0 Hours.** Class-80.0. Clinical-0.0. Lab-0.0. Work-0.0

This is the national fire academy chemistry of hazardous materials course. It details various chemical uses and provides the student with a in depth understanding of the chemical process and formulas.

**FIP 8906. Hazardous Materials: Transportation Accident. 0.0 Hours.** Class-13.0. Clinical-0.0. Lab-0.0. Work-0.0

This course deals with the handling of the hazardous materials during rail, highway, water, and airway accidents. This course provides procedures and policies that should be used in the event of a transportation accident involving hazardous materials.

**FIP 8908. Special Topics. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This course will allow students to be exposed to new and emerging issues in fire and rescue as well as broaden your awareness of the Incident Command System.

**FIP 8909. Incident Command System 300. 0.0 Hours.** Class-33.0. Clinical-0.0. Lab-0.0. Work-0.0

This course provides training for personnel who require advanced application of the Incident Command System (ICS). The course expands upon information covered in the ICS -100, ICS -200 courses.

**FIP 8910. Incident Command 400. 0.0 Hours.** Class-33.0. Clinical-0.0. Lab-0.0. Work-0.0

This course provides training for personnel who require advanced application of the Incident Command System (ICS). The course expands upon information covered in the ICS -100-300 courses.

**FIP 8911. Personal Protective Equipment. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

The firefighter candidate will be presented the function of each article of protective equipment, the leading causes of death of firefighters, and the hazardous environments requiring use of protective equipment. In addition, there is a great deal of information covering the SCBA and its use.

**FIP 8912. TR Rescue Operations. 0.0 Hours.** Class-12.0. Clinical-0.0. Lab-0.0. Work-0.0

This certification-related course in rescue operations will present the Technical Rescuer (TR) with the requirements for pre-planning, scene size-up, and hazards assessment for incidents involving rope rescue. This course will also introduce the Technical Rescuer to applicable standards addressing rope rescue, personal protective equipment, accessory gear, rope software, and rope hardware. This course should be offered consistent with the most current NC Fire and Rescue Commission guidelines. Contact the Office of State Fire Marshal (OSFM) for details. Reference NFPA 1006 Chapters five and six.

**FIP 8913. TR Anchors and Mechanical Advantage Systems. 0.0 Hours.** Class-15.0. Clinical-0.0. Lab-0.0. Work-0.0

This certification-related course in anchors and Mechanical Advantage Systems (MAS) will present the Technical Rescuer (TR) with the correct techniques for the set-up, operation, and function of various multi-point anchor and portable anchor/lifting platform systems used during rope rescue incidents. This course should be offered consistent with the most current Office of State Fire Marshal (OSFM) guidelines. Contact OSFM for details. Reference NFPA 1006 Chapters Five and Six.

**FIP 8914. TR Fixed Rope Systems. 0.0 Hours.** Class-12.0. Clinical-0.0. Lab-0.0. Work-0.0

This certification related course in fixed rope systems will present the Technical Rescuer (TR) with the correct techniques for the set-up, operation, and function of fixed rope systems used during rope rescue incidents. This course should be offered consistent with the most current NC Fire and Rescue Commission guidelines. Contact the Office of State Fire Marshal (OSFM) for details. Reference: NFPA 1006 Chapters Five and Six.

**FIP 8915. TR Health and Wellness. 0.0 Hours.** Class-8.0. Clinical-0.0. Lab-0.0. Work-0.0

This certification-related course in health and wellness will present the Technical Rescuer (TR) with an overview of a healthy lifestyle and its importance to emergency services operations. This course should be offered consistent with the most current NC Fire and Rescue Commission guidelines. Contact the Office of State Fire Marshal (OSFM) for details. Reference: NFPA 1006 chapters five and six.

**FIP 8916. TR Helicopter Transport. 0.0 Hours.** Class-6.0. Clinical-0.0. Lab-0.0. Work-0.0

This certification-related course will in helicopter transport will present to the Technical Rescuer (TR) general operating and safety guidelines when working with helicopters at emergency scenes for the protection of on-scene emergency providers, flight crews, and the civilian population. This course should be offered consistent with the most current NC Fire and Rescue Commission guidelines. Contact the Office of State Fire Marshal (OSFM) for details. Reference: NFPA 1006 Chapters five and six.

**FIP 8917. TR Horizontal Systems. 0.0 Hours.** Class-12.0. Clinical-0.0. Lab-0.0. Work-0.0

This certification-related course in horizontal systems will present the Technical Rescuer (TR) with the correct techniques for the set-up, operation, and function of horizontal systems for use at a rope rescue incident. This course should be offered consistent with the most current NC Fire and Rescue Commission guidelines. Contact the Office of State Fire Marshal (OSFM) for details. Reference: NFPA 1006 Chapters Five and Six.

**FIP 8918. TR Lowers and Raises. 0.0 Hours.** Class-12.0. Clinical-0.0. Lab-0.0. Work-0.0

This certification-related course will present the Technical Rescuer (TR) with the correct techniques for the set-up, operation, and function of various types of high angle raising and lowering operations involving litters during a rope rescue incident. This course should be offered consistent with the most current NC Fire and Rescue Commission guidelines. Contact the Office of State Fire Marshal (OSFM) for details. Reference: NFPA 1006 Chapters five and six.

**FIP 8919. TR Personal Protective Equipment. 0.0 Hours.** Class-11.0. Clinical-0.0. Lab-0.0. Work-0.0

This certification-related course in personal protective equipment (PPE) will introduce to the Technical Rescuer (TR) the need for and use of the PPE to enable the rescuer to perform his/her duties in a safe and responsible manner. Physical characteristics of rescuers, stress, endurance, and the limitations of equipment will be discussed. This course should be offered consistent with the most current NC Fire and Rescue Commission guidelines. Contact the Office of State Fire Marshal (OSFM) for details. Reference: NFPA 1006 Chapters Five and Six.

**FIP 8920. TR Rescue Equipment. 0.0 Hours.** Class-6.0. Clinical-0.0. Lab-0.0. Work-0.0

This certification-related course in rescue equipment will introduce the Technical Rescuer (TR) to the operation and function of various tools and equipment commonly used in rescue operations. This course will also present procedures for care, inspection, and maintenance of personal protective equipment, tactical equipment, and apparatus. The value of periodic inspection and maintenance to reduce the chances of unexpected equipment failure, performance failure, disabling injuries, and fatalities will be discussed. This course should be offered consistent with the most current NC Fire and Rescue Commission guidelines. Contact the (OSFM) for details. Reference NFPA 1006 Chapters five and six.

**FIP 8921. TR Rope Basics. 0.0 Hours.** Class-12.0. Clinical-0.0. Lab-0.0. Work-0.0

This certification-related course in rope basics will present to the Technical Rescuer (TR) safe and effective methods of rescue in elevated and below grade environments using ropes, knots, and rope related equipment. Mechanical advantage, anchors, anchoring techniques, and stress loads will be covered. This course should be offered consistent with the most current NC Fire and Rescue Commission guidelines. Contact the Office of State Fire Marshal (OSFM) for details. Reference NFPA 1006 Chapters five and six.



**FIP 8922. TR Victim Management. 0.0 Hours.** Class-16.0. Clinical-0.0. Lab-0.0. Work-0.0

This certification-related course in victim management will offer the Technical Rescuer (TR) practical applications for correctly gaining access to , stabilizing the environment, packaging, and removing patients from a rope rescue incident. All the elements of anchors, fixed rope systems, lowers and raises, and high lines are employed. This course should be offered consistent with the most current NC Fire and Rescue Commission guidelines. Contact the Office of State Fire Marshal (OSFM) for details. Reference: NFPA 1006 Chapters five and six.

**FIP 8923. Intelligently Aggressive Incident Command. 0.0 Hours.** Class-33.0. Clinical-0.0. Lab-0.0. Work-0.0

Fire Departments today are facing unique challenges unlike ever before. Their service delivery model is ever expanding while their staffing and budgets are being constantly reduced. In response to these demanding times, incident commanders are tasked with managing large scale incidents with even less resources. This course prepares today's fire officer to meet these challenges.

## Geographic Information Systems (GIS)

**GIS 7011. Introducing ArcGIS. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

ArcGIS is a GIS developed and sold by Environmental Systems Research Institute, Inc. (ESRI). It has a long history and has been through many versions and changes. Originally developed for large mainframe computers, in the last 10 years it has metamorphosed from a system based on typed commands to a full-featured graphical user interface (GUI), which makes it easier to use. Because of the size and complexity of the suite of programs, and because users have come to depend on certain aspects of the software, much of the code is carried forward and included in new versions. Knowing this background helps a student of ArcGIS understand the nature of the ArcGIS system, and helps explain some of its odd features and characteristics.

**GIS 7012. Working with ArcMap. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

ArcMap works with map documents; a map document is a collection of different spatial data layers and tables, along with instructions for how the layers will be displayed. Map features have properties that control the symbol, color, and style with which they are drawn. Tables have properties that specify which fields are shown, how many decimal places are included, and so on. The map document keeps track of all of these layers and their properties, so that when it is opened again, the map appears exactly as it was when it was last saved. Even the size of the windows and the location of the toolbars are stored when saving the document.

**GIS 7013. Coordinate Systems and Map Projections. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

A successful GIS system depends in large part on using projections correctly, and a person's skill in managing and converting projections can dictate the value of a database. Unfortunately, projections can be somewhat daunting to those encountering them for the first time, so review is often necessary to become comfortable. One learns best about projections by working with them.

**GIS 7014. Drawing & Symbolizing Features. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

ArcMap provides many ways to present and analyze map data, and one of the most powerful techniques is assigning symbols based on one or more attributes. Readers can quickly see spatial patterns not readily apparent from looking at the data. This section presents many ways to display features, and it also shows how to edit symbols and save them in groups, as styles.

**GIS 7015. Working with Tables. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

A table is a data structure for storing multiple attributes about a location or object. ArcGIS manages these data tables in an object it refers to as a Table, which is a window that displays information from the tabular data structure and allows the user to work with the information in the file. The data may come from several types of data files, but the Table itself always looks the same and has the same functions, so that users don't need to learn different commands for working with different file types.

**GIS 7016. Queries. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

A query extracts features or records from a data table and isolates them for further use, such as printing them, calculating statistics, editing them, creating new files from them, or doing more queries. In the simplest kind of query, the selected features are highlighted on the screen, and the corresponding records in the table are highlighted as well. This course provides examples of that selection and highlighting.

**GIS 7017. Spatial Joins. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

A spatial join is similar to an attribute join except that instead of using a common field to decide which rows in the table match up, the location of the spatial feature is used. For example, a point layer containing locations of wells and a polygon layer of geology could be joined to determine the geologic unit the well lies within. Each well gets the attribute information from the polygon it lies inside. An alternate criterion is distance - joining records that lie closest to each other, such as tagging each hotel with its closest restaurant.

**GIS 7018. Map Overlay. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

Spatial joins, although powerful, are limited when spatial features do not overlap exactly. When this limitation occurs, the ability to split features and assign use to each section is required. This ability to split features that partially overlap is the most important feature of a map overlay and explains how it differs from a join.

**GIS 7019. Presenting Data. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

GIS analysis often results in information to be shared with others in the form of maps or reports. Whether you're creating a large poster-style map, a page-sized map, or a report, a few guidelines help in devising a map design which expresses the essence of the data and gets its message across. This section introduces some basic ways to communicate ideas to others.

**GIS 7110. Geocoding. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

A street address contains a type of spatial information; however, additional knowledge on the part of the post office is required in order to deliver mail, e.g. the location of the street and the sequence of house numbers. Geocoding combines map information with street addresses in order to locate a point uniquely; it enables someone to convert a list of addresses into points on a map.

**GIS 7111. Basic Editing in ArcMap. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

Editing in ArcMap provides the ability to modify and update existing layers of data, or to create new ones. For example, if a housing subdivision is added to a city, the new roads must be added to the city's roads layer. Likewise, new parcels, sewer lines, and other infrastructure need to be added to the city database to ensure it is up to date. A new layer may be created to reflect a city council's decision to create garbage collection zones where none existed before. This section provides insight into these processes.

**GIS 7112. More Editing Techniques. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

Examining additional ways to form and modify features. First, examining the functions of the different types of sketch tools, look at ways to modify and reshape features, combine features together, and create new features by buffering old ones. Finally, discovering how to easily edit features which share a common boundary.

**GIS 7113. Working with Geodatabases. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

In ArcGIS software, coverages were the first data model used. Later in ArcView, shapefiles were developed; in ArcGIS 8 the geodatabase model arrived. The new model offers advantages over coverages and shapefiles but is simpler in construction and more robust in general usage. This module provides insight into those advantages.

**GIS 7114. Analyzing Networks. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

Networks consist of a system of paths traveled by a variety of things, e.g. traffic, water, sewage or electricity; they generally also have a modeling capability to be able to better answer common problems that may arise. Geodatabases contain a special data model developed to answer those same kinds of questions by creating a network of feature classes or layers. This module explores that technique.

**GIS 7115. Raster Analysis. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

The availability of two different data models, raster and vector, provides added flexibility to options for data storage and analysis. Neither model is intrinsically superior; both have areas in which they excel and areas in which they are at a disadvantage. Having a grasp of both tools holds the key to developing the most efficient and accurate analysis.

**GIS 7116. Introduction to ArcGIS 9.3. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

ArcGIS 9.3 is a software package developed and sold by Environmental Systems Research Institute, Inc. (ESRI). It has a long history and has been through many versions and changes. Originally developed for large mainframe computers, in the last 10 years it has metamorphosed from a system based on typed commands to a full-featured graphical user interface (GUI), which makes it easier to use. Because of the size and complexity of the suite of programs, and because users have come to depend on certain aspects of the software, much of the code is carried forward and included in new versions. Knowing this background helps a student of ArcGIS understand the nature of the ArcGIS system, and helps explain some of its odd features and characteristics.

**GIS 7117. Introduction to ArcPad and GPS Analyst. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

A comprehensive suite of theory, techniques, and hands-on practice to learn to use GPS equipment and software for data collection, with the final product being a geospatial data layer. Course emphasis is on how to complete a GPS project from start to finish. The student will learn how to plan a field collection, create a data dictionary, download and correct GPS data, and then export to a GIS data format. Equipment and software used during the course for project planning and field exercises include Trimble Mapping GPS receivers, Pathfinder Office and GPS Analyst software, and ESRI ArcGIS and ArcPad software.

**GIS 7200. HAZUS-Multi-Hazard Training - Hurricanes. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This class is designed specifically to provide training in: An introduction and overview of HAZUS; The particular nuances using ArcGIS software for map creation and basic editing; And the use of models for various hurricane scenarios.

**GIS 7320. Integrating Cultural Resources with GIS GPS. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

A comprehensive suite of theory, techniques, and hands-on practice to learn to use GPS equipment/software for data collection, with the final product being a geospatial data layer inside. Course emphasis is on how to complete a cultural resources GPS project from start to finish. The student will learn how to plan a field collection, create an SDS compliant data dictionary, download and correct GPS data, and then export to a GIS data format. Equipment and software used during the course for project planning and field exercises includes Trimble Mapping GPS receivers, TerraSync Field Software, Pathfinder Office software, and ESRI ArcGIS.

**GIS 7500. GIS in Economic Development. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

Having the right tool for the right job is an accurate way of describing the requirement for the use of GIS technology in the role of economic development. Without the tool and data, performing adequate analysis to be able to determine suitable (or best) site selections are extremely difficult and sometimes impossible. Without that analysis, marketing or other forms of communications of strengths is a formidable task. This course describes those tools, data and communication techniques.

**GIS 7700. GPS in GIS. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

A comprehensive suite of theory, techniques, and hands-on practice to learn to use GPS equipment/software for data collection, with the final product being a geospatial data layer inside. Course emphasis is on how to complete a cultural resources GPS project from start to finish. The student will learn how to plan a field collection, create a data dictionary, download and correct GPS data, and then export to a GIS data format. Equipment and software used during the course for project planning and field exercises includes Trimble Mapping GPS receivers, TerraSync Field Software, Pathfinder Office software, and ESRI ArcGIS.

**GIS 8101. Working with ArcPad 7. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

ArcPad is ESRI's mobile GIS software that is used to capture, display, analyze, and edit geographic information in the field. This focused course provides an overview of ArcPad 7 and demonstrates some of its powerful capabilities. Students learn about the wide range of tools, symbols, and style sheets that come with ArcPad and how ArcPad is used to gather and edit data. The course emphasizes best practice principles and considerations for common field tasks.

**GIS 8111. Learning ArcGIS9. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

ArcGIS Desktop software is an integrated system that includes all the tools needed to get the most out of a GIS. This course introduces fundamental concepts of GIS and the major functionality contained within ArcGIS Desktop software. In course exercises, participants follow the GIS analytical process and work with a variety of tools to solve realistic problems. This course emphasizes practical GIS skills.

**GIS 8112. Creating and Integrating Data for Natural Resource Applications. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

Frequently, the natural resource data needed for a project (such as vegetation, species locations, or watersheds) does not exist. Or, the data may exist but significant manipulation is required before it can be displayed and used for analysis in a GIS. This four-module course teaches methods for acquiring, evaluation, creating, manipulating, and integrating data in preparation for analysis and map creation. Participants will learn tips for assembling a high-quality database, as well as best practice approaches to data problems commonly encountered by those in the natural resource and conservation fields. In a course project, participants apply the skills they've learned throughout the course.

**GIS 8115. Creating, Editing, and Managing Geodatabases for ArcGIS 9. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

The geodatabase is the ESRI data model that allows features to be modeled more realistically than ever before. This course covers all the basics and introduces the more advanced functionality that makes the geodatabase such a powerful data model. Participants will be able to get started working with geodatabases right away and understand the range of functionality that the geodatabase offers.

**GIS 8120. Understanding Map Projections and Coordinate Systems. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

Map projections and coordinate systems enable us to map the three-dimensional earth on a two-dimensional surface such as paper or a computer screen. This course introduces the fundamental concepts behind map projections, datums, and coordinate systems. Participants learn how the earth's shape is defined and how geographic features are positioned using spherical coordinate systems. Essential characteristics of all map projections—aspect, perspective, and distortion—are discussed. Participants work with several popular projections and learn in which circumstances to use them. The emphasis is on theory, but participants gain practical experience working with ArcGIS software to apply map projections, modify their properties, and manipulate data sets stored in different coordinate systems. This course does not teach the mathematics behind individual map projections.

**GIS 8121. Cartographic Design Using ArcGIS 9. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

As more people begin making maps using GIS software, they need to understand cartographic design principles that will help them create maps that are clear and convincing to those who will read them. This course discusses key design issues and teaches practical guidelines for creating maps that are well suited to their display medium and that speak effectively to their audience. Participants learn fundamental design principles and practice with the ArcGIS Desktop tools for creating high-quality maps.

**GIS 8122. Working with Map Topology in ArcGIS. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This workshop provides an overview of map topology and gives ArcView users a foundation for working with map topology tools.

**GIS 8125. Learning ArcGIS 9 3D Analyst. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

ArcGIS 3D Analyst software provides advanced tools for three-dimensional modeling and analysis. This course teaches what a surface model is and shows how to create both raster and vector surfaces. Working mostly with models of terrain, participants display surfaces in three-dimensional perspective, symbolize them, and set three-dimensional properties. Participants also create realistic models by draping aerial photographs over surfaces and displaying two-dimensional features in three dimensions.

**GIS 8130. Creating and Maintaining Using ArcGIS Desktop. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

Metadata, the key information that documents a dataset, has emerged as a powerful tool for safeguarding an organization's investment in spatial data. Documenting datasets allows people to efficiently find them, evaluate their usefulness for a particular project, and share them with others. This course shows how metadata supports efficient management and use of spatial data and teaches practical strategies for creating and maintaining metadata using ArcGIS Desktop software. Participants learn how to write proper metadata using tools in ArcCatalog and how to automate metadata workflows using templates.

**GIS 8131. Creating and Editing Geodatabase Topology with ArcGIS 9. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

ArcGIS software provides full support for geodatabase topology, including an advanced editing environment for maintaining topological relationships among features. This course explains how topology is implemented in the geodatabase and teaches how to use geodatabase topology to more accurately model the real world.

**GIS 8132. Understanding Branching & Looping in VBA. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

Branching allows programs to execute different code based on user input or the result of a process. With looping, programs can repeat processes until specific conditions are met. This workshop introduces the two branching methods (the If Then Else statement and the Select Case statement) and the two looping structures (the For Next loop and the Do loop) that are available in the VBA environment, and teaches how to implement them. The workshop also teaches how branching and looping can be used in conjunction with ArcObjects.

**GIS 8135. Learning ArcGIS 9 Spatial Analyst. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

ArcGIS Spatial Analyst software supports a broad range of sophisticated spatial modeling and analysis applications. This course teaches how to use ArcGIS Spatial Analyst to produce and control raster data. Participants create a variety of raster surfaces including hillshade relief maps, slope and aspect surfaces, and density and distance surfaces. In course exercises, participants work within the new ArcGIS geoprocessing environment to create, execute, and automate spatial analysis workflows.

**GIS 8161. Customizing ArcGIS 9. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

Designed for nonprogrammers, this course reveals how to customize ArcMap and ArcCatalog. By rearranging interface controls and taking advantage of available code samples, participants learn how to tailor ArcGIS to match individual preferences and workflows. The course covers how to rearrange basic elements of the interface, customize toolbars and menus, and create custom tools and buttons. Additionally, participants learn how to locate and implement existing VBA code samples to add custom functionality.

**GIS 8162. Customizing ArcMap: Easy Ways to Extend the Interface. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This workshop introduces easy ways to add custom functionality to the ArcMap interface. Using sample Visual Basic and VBA code, participants learn how to add, remove, and rearrange toolbars and menus; create new buttons, tools, command, and shortcut keys; and access commands that are not on the ArcMap interface.

**GIS 8211. Spatial Analysis of Geohazards Using -Arcgis 9. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

Geologic hazards loom all around. As population growth forces more communities to expand into areas at risk, concern increases about the danger that geohazards pose to people, property, and the environment. This course shows how GIS can be used to determine where geohazards are likely to occur and assess their potential impact on the human community. Participants work with ArcGIS Desktop software to analyze and map a variety of geohazards. A better understanding of these events is the first step toward effective disaster planning.

**GIS 8215. Creating and Editing Geodatabase Features with ArcGIS 9. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

ArcGIS 9 software introduces new and improved sketch and edit tools for the geodatabase. This course teaches how to use those tools to build a geodatabase from the ground up. Participants learn how to utilize ArcMap's standard and advanced tools to create and edit simple and complex features as well as feature-linked and dimension annotation. Additionally, participants learn how to work with features using coordinate geometry (COGO) descriptions and survey measurements.

**GIS 8220. Introduction to ArcGIS I. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

ArcGIS Desktop software is an integrated system that includes all the tools needed to get the most out of a GIS. This course introduces fundamental concepts of GIS and the major functionality contained within ArcGIS Desktop software. In course exercises, participants follow the GIS analytical process and work with a variety of tools to solve realistic problems. This course emphasizes practical GIS skills.

**GIS 8221. Introduction to Urban and Regional Planning Using ArcGIS 9. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

For decades, urban and regional planners have used GIS technology to help find solutions to the challenges posed by increasing population growth and urban development. This course covers basic urban and regional planning concepts and tasks and teaches how those tasks can be managed using GIS techniques and ArcGIS Desktop software. Participants learn how to use ArcGIS tools to address real-world social, economic, and environmental planning problems. The skills and techniques presented in the course provide an effective and efficient means of carrying out urban and regional planning tasks.

**GIS 8225. Geoprocessing with ArcGIS Desktop. 0.0 Hours.**

Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0  
Geoprocessing is a primary function of a GIS. ArcGIS Desktop software provides hundreds of tools for processing geographic data as well as ModelBuilder, a graphical environment for visualizing and executing work flows. This five-module course teaches practical strategies for using the ArcGIS geoprocessing framework to accomplish GIS work flows. Participants work with geoprocessing tools to create and organize workspaces, prepare data for analysis, and perform GIS analysis tasks, then learn how to streamline processes using models and scripts. Participants also learn how to create custom geoprocessing tools and the importance of documenting custom tools, scripts, and models. This course provides a solid foundation in the ArcGIS Desktop geoprocessing framework and emphasizes hands-on practice through software exercises.

**GIS 8230. Turning Data into Information Using ArcGIS 9. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This course examines the scientific methods used to derive useful information from spatial data. Participants will explore GIS theory related to the visualization, measurement, transformation, and optimization of spatial data. An underlying theme that uncertainty is an inherent characteristic of spatial data is thoroughly examined and students learn how to identify it, measure it, and live with it.

**GIS 8232. Protecting Your Investment in Data with Metadata. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This course is designed to make GIS professionals take a critical look at their data documentation needs. Further, this course is designed to teach GIS professionals how to use ArcCatalog to document their data according to the Federal Geographic Data Committee's (FGDC) Content Standard for Digital Geospatial Metadata.

**GIS 8235. Working with Rasters in ArcGIS 9. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

Many geographic phenomena are best represented as rasters, but GIS users tend to be less familiar with this data model than with the vector data model. This course unlocks the mysteries of the raster. Participants learn which types of geographic phenomena are appropriately represented as rasters and how the type of data affects raster analysis. In course exercises, participants explore and work with a variety of raster datasets using core ArcGIS tools. Participants gain experience displaying rasters and modifying their properties to aid visual interpretation.

**GIS 8240. Solving Disaster Management Problems Using ArcGIS 9. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

Participants will learn to apply GIS to protect life, property, and critical infrastructure from natural disasters such as earthquakes, hurricanes, volcanoes, floods, and wildfires, as well as human-caused disasters, including technological hazards or acts of terrorism. Key GIS applications include natural hazard identification and mapping, multi-hazard analysis, shelter planning, mitigation, damage assessment, and recovery monitoring. Additionally, participants will learn how to present GIS data in ways that support emergency management analyses.

**GIS 8300. Google Sketchup for GIS modeling. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This course will introduce and explore the tools and techniques needed to build three dimensional (3D) models using Google Sketchup and ArcGIS. Students will learn the basic techniques of creating 3D models by using basic shapefiles and TIN's in ArcGIS and extruding their elevations with Google Sketchup. Advanced techniques such as "painting" and "landscape visualization" will be introduced to create more realistic scenes.

**GIS 8400. Creating GIS Web-Mapping Applications. 0.0 Hours.**

Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0  
This course will focus on some of the different methods for creating and deploying useful Internet Web-Mapping applications. Students will focus on using ArcGIS Server to build and deploy applications including ArcGIS Server web mapping, Google Earth and Google Maps KML and KMZ files, and using the ArcGIS Server platform to manage web mapping applications. Students will also learn techniques in ArcMap to build maps that will function properly in ArcGIS Server and basic server maintenance for web mapping applications.



### **GIS 8600. Building and Managing a Geodatabase in ArcGIS. 0.0**

**Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This class is designed to introduce basic concepts in building and managing a geodatabase and to explore advanced options for geodatabase use. The course will guide the student through the design process and illustrate multiple methods in customizing a geodatabase. Special emphasis will be placed on topology, annotation, and coordinate systems.

### **GIS 8800. GIS/GPS for NC Water Technicians. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This class is designed specifically for the NC Rural Water Association for technicians in NC water & stormwater utilities. It is designed to provide training in: GIS concepts, the particular nuances using ArcGIS software for map creation and basic editing, and the use of GPS devices and procedures to integrate position data into GIS systems.

### **GIS 8801. GIS/GPS for NC Water Technicians II. 0.0 Hours.**

Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This class is designed specifically for the NC Rural Water Association for technicians in NC water & stormwater utilities. It is designed to provide training in: GIS concepts, the particular nuances using ArcGIS software for map creation and basic editing, and the use of GPS devices and procedures to integrate position data into GIS systems.

### **GIS 8802. Water Association-Introduction to GIS. 0.0 Hours.**

Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This class is designed specifically for the NC Rural Water Association for technicians in NC water & stormwater utilities. It is designed to provide training in: GIS concepts, The particular nuances using ArcGIS software for map creation and basic editing.

### **GIS 8803. Water Association-Introduction to GPS. 0.0 Hours.**

Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This class is designed specifically for the NC Rural Water Association for technicians in NC water & stormwater utilities. It is designed to provide training in: The use of GPS devices and procedures to integrate position data into GIS systems.

### **GIS 8804. Water Association-Introduction to Cartography. 0.0 Hours.**

Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This class is designed specifically for the NC Rural Water Association for technicians in NC water & stormwater utilities. It is designed to provide training in: Map Creation; Basic Editing & Features of maps.

### **GIS 8805. Water Association-Advanced GIS. 0.0 Hours.** Class-440.0.

Clinical-0.0. Lab-0.0. Work-0.0

This class is designed specifically for the NC Rural Water Association for technicians in NC water & stormwater utilities. It is designed to provide training in: Geoprocessing (Spatial Analysis); More Editing Techniques; Analyzing Networks.

### **GIS 8901. GIS/GPS Primer for Environmental Use. 0.0 Hours.**

Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This course will include content from 4 established courses: GIS8101 includes "A focused course provides an overview of ArcPad 7 and demonstrates some of its powerful capabilities". GIS8111 "introduces fundamental concepts of GIS and the major functionality contained within ArcGIS Desktop software". GIS8112 "Teaches methods for acquiring, evaluating, creating, manipulating, and integrating data in preparation for analysis and map creation". GIS8120 includes "Map projections and coordinate systems to enable students to map the three-dimensional earth on a two-dimensional surface such as paper or a computer screen".

## **German (GER)**

### **GER 7000. Technical German. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

The course will offer lectures and practice of German language concept with an emphasis on technical vocabulary building and on the development of conversational and understanding skills required at the workplace.

## **Health (HEA)**

### **HEA 7131. Tanning Booth Certification. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

### **HEA 7209. State Board Optics Review. 0.0 Hours.** Class-20.0. Clinical-0.0. Lab-0.0. Work-0.0

This course is a review of optics i, optics ii, optics iii, optics iv, optics v, and optics vi.

### **HEA 7226. Osha Bloodborne Pathogens Standards. 0.0 Hours.** Class-10.0. Clinical-0.0. Lab-0.0. Work-0.0

This course is designed to provide mandated training on the osha bloodborne pathogens standard as specified in the standard.

### **HEA 7235. Neonatal Resuscitation Program. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This course is designed to equip the health care provider with the necessary skills to manage emergency situations in the newborn.

### **HEA 7236. Pediatric Advanced Life Support. 0.0 Hours.** Class-16.0. Clinical-0.0. Lab-0.0. Work-0.0

The PALS course is designed to certify EMS and Critical Care Personnel in Pediatric Advanced Life Support through the American Heart Association. This course teaches the proper evaluation and treatment of a pediatric patient in cardiopulmonary arrest. Upon successful completion, the student will be awarded PALS certification from the American Heart Association. Pre-requisite: Initial PALS course, BLS certification. It is desirable but not required that and ALS certification be held.

### **HEA 7244. Advanced Cardiac Life Support (ACLS). 0.0 Hours.**

Class-20.0. Clinical-0.0. Lab-0.0. Work-0.0

This course follows the standard American Heart Association guidelines. It provides physicians, nurses, paramedics and other health care providers with information concerning advanced management of the adult cardiac patient. Upon successful completion, the student will be awarded ACLS certification from the AHA. Pre-requisite: Previous ACLS course and current AHA Basic Life Support for the Healthcare Provider (CPR certification).

### **HEA 7245. Venipuncture Techniques for Lab Draws And IV Therapy. 0.0 Hours.** Class-30.0. Clinical-0.0. Lab-0.0. Work-0.0

This course is designed to provide health care professionals with the necessary skills for obtaining laboratory samples and providing IV therapy.

### **HEA 7246. Pre-Hospital Trauma Life Support. 0.0 Hours.** Class-16.0. Clinical-0.0. Lab-0.0. Work-0.0

Understanding the need of the trauma patient. Teaches that critically injured patient must be transported as quickly as possible, without detailed examination and treatment of non-Critical conditions. Accomplished through lecture and skills assessment. Studies kinematics of trauma, patient assessment & mgt, airway mgt, ventilation, thoracic trauma.

### **HEA 7247. Pediatric Advanced Life Support Recertification. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

Recertification course needed to maintain certification in advanced pediatric life support.

**HEA 7248. Pediatric Advanced Life Support Instructor Trainer Course. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

Designed instructors to teach pediatric advanced life support after successful completion of the course, participants will be certified as preceptors through the American Heart Association.

**HEA 7249. Advanced Cardiac Life Support- Recertification. 0.0 Hours.**

Class-16.0. Clinical-0.0. Lab-0.0. Work-0.0

Required yearly recertification to remain certified as a provider of ACLS.

**HEA 7250. Exploring Medical Language. 0.0 Hours.** Class-24.0.

Clinical-0.0. Lab-0.0. Work-0.0

Basic medical terminology course for health care personnel. Medical terms will be introduced using word roots, suffixes and prefixes as the student explores the various body structures and systems.

**HEA 7252. Pre-Hospital Trauma Life Support Renewal. 0.0 Hours.**

Class-10.0. Clinical-0.0. Lab-0.0. Work-0.0

This course is designed to review the key content of the initial PHTLS course and expand the participant's knowledge and understanding of the special considerations in assessment and management of the pediatric and the elderly trauma victim. Current changes and controversies are identified and each participant should receive the knowledge and develop the ability to perform the skills identified as recommended by prehospital trauma care standards.

**HEA 7253. Prehospital Trauma Life Support Instructor. 0.0 Hours.**

Class-16.0. Clinical-0.0. Lab-0.0. Work-0.0

The purpose of this course is to provide the pre-hospital trauma life support instructor coordinator candidates with the knowledge, skills, and support materials necessary to conduct and/or participate as a faculty member in an approved PHTLS course.

**HEA 7254. Exploring Medical Language. 0.0 Hours.** Class-164.0.

Clinical-0.0. Lab-0.0. Work-0.0

This is a medical terminology course that includes the basics of anatomy and physiology, disease process and pharmacology.

**HEA 7255. CPT Medical Coding. 0.0 Hours.** Class-150.0. Clinical-0.0.

Lab-0.0. Work-0.0

This course is designed to train medical record personnel in medical coding using the CPT procedural codes.

**HEA 7256. Basic Coding Principles of ICD-9-CM. 0.0 Hours.**

Class-30.0. Clinical-0.0. Lab-0.0. Work-0.0

A course designed to introduce ICD-9-CM coding to individuals who have not had formal training in format and coding guidelines and also to be a refresher course for individuals who have not used coding for a period of time.

**HEA 7260. Basic ICD-9-CM and CPT Medical Coding. 0.0 Hours.**

Class-150.0. Clinical-0.0. Lab-0.0. Work-0.0

Students will learn basic procedure codes for use in physician offices. Must have some medical terminology background.

**HEA 7265. Anatomy & Physiology for CCE Students. 0.0 Hours.**

Class-80.0. Clinical-0.0. Lab-0.0. Work-0.0

Basic anatomy and physiology course designed for students entering medical transcription and medical coding classes.

**HEA 7270. Medical Reimbursement Specialist. 0.0 Hours.** Class-150.0.

Clinical-0.0. Lab-0.0. Work-0.0

Students will learn basic ICD-10-CM and CPT coding skills. Students will gain knowledge of Medicare, Medicaid, Managed Care, insurance terminology, billing and reimbursement skills. Must complete HEA 7254 and HEA 7265 or their equivalents. Department permission needed.

**HEA 7271. Medical Reimbursement Specialist- ICD-9. 0.0 Hours.**

Class-150.0. Clinical-0.0. Lab-0.0. Work-0.0

Students will learn basic coding skills, Medicare, Medicaid, insurance terminology and billing and reimbursement skills.

**HEA 7272. Advanced Cardiac Life Support Instructor Course. 0.0 Hours.**

Class-20.0. Clinical-0.0. Lab-0.0. Work-0.0

This course is designed to prepare the individual to set up, teach and evaluate advanced cardiac life support courses.

**HEA 7275. Medical Billing and Reimbursement. 0.0 Hours.**

Class-150.0. Clinical-0.0. Lab-0.0. Work-0.0

This course is designed to teach students the fundamental skills necessary to perform medical billing in today's managed care environment.

**HEA 7280. Hospital Coding. 0.0 Hours.** Class-150.0. Clinical-0.0.

Lab-0.0. Work-0.0

This course will give students instruction in ICD-9-CM diagnosis and CPT code assignments for hospital records. Students should be acquainted with basic coding before entering this course.

**HEA 7300. Skills for Success. 0.0 Hours.** Class-440.0. Clinical-0.0.

Lab-0.0. Work-0.0

Provides students with study skills necessary for school and dietary management program success.

**HEA 7301. Basic Coding Principles of ICD-9-CM. 0.0 Hours.**

Class-30.0. Clinical-0.0. Lab-0.0. Work-0.0

A course designed to introduce ICD-9-CM coding to individuals who have not had formal training in format and coding guidelines and also to be a refresher course for individuals who have not used coding for a period of time.

**HEA 7302. CPT Medical Coding. 0.0 Hours.** Class-150.0. Clinical-0.0.

Lab-0.0. Work-0.0

This course is designed to train medical record personnel in CPT medical coding.

**HEA 7304. Therapeutic Nutrition. 0.0 Hours.** Class-280.0. Clinical-0.0.

Lab-0.0. Work-0.0

Course includes diet modifications as a response to illness, disease, growth and development, and old age.

**HEA 7305. Food Systems Management. 0.0 Hours.** Class-280.0.

Clinical-0.0. Lab-0.0. Work-0.0

Prepares students in the areas of safety, sanitation, accident prevention, menu planning and food preparation.

**HEA 7306. Personnel and Administration. 0.0 Hours.** Class-280.0.

Clinical-0.0. Lab-0.0. Work-0.0

Covers professional roles, responsibilities, personnel management, and problem solving.

**HEA 7307. Neonatal Resuscitation - Instructor Trainer Course. 0.0 Hours.**

Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

**HEA 7311. Optometric Technician Course. 0.0 Hours.** Class-20.0.

Clinical-0.0. Lab-0.0. Work-0.0

This course is designed to provide participants with the skills necessary to function in the capacity of technician with in an optometric or ophthalmic medical practice.

**HEA 7312. Intermediate ICD-9-CM Coding. 0.0 Hours.** Class-30.0.

Clinical-0.0. Lab-0.0. Work-0.0

Follow up course to basic ICD-9-CM coding, this course will provide participants with additional coding guidelines and teach the student how to apply the basic guidelines to specific body systems. This course will provide more hands-on coding.

**HEA 7313. Advanced Coding. 0.0 Hours.** Class-150.0. Clinical-0.0. Lab-0.0. Work-0.0

This course is a continuation of basic and intermediate coding. It will provide in-depth coverage of ICD-10-CM and CPT coding. Must pass HEA 7270 first. Department permission required.

Corequisites: Take HEA 7270 minimum grade S

**HEA 7315. EKG Technician. 0.0 Hours.** Class-112.0. Clinical-0.0. Lab-0.0. Work-0.0

Students will gain knowledge of cardiac terminology, understand the structure and function of the heart, and understand the anatomy and physiology of the heart. Students will gain basic understanding of the electrical conduction system and how it affects heart function. Students will identify why the EKG is done. Students will identify common arrhythmias, and demonstrate patient prep as well as proper placement of EKG leads. Students will be able to properly and safely operate the equipment, run a 12 lead EKG accurately and prepare it for reading.

**HEA 7316. Dietary Managers Assoc. Exam Review. 0.0 Hours.** Class-280.0. Clinical-0.0. Lab-0.0. Work-0.0

This review course covers the materials taught in each of the four dietary managers training course program--Nutrition through the life cycle, therapeutic nutrition, food systems management, and personnel and administration.

**HEA 7317. Food Systems Management. 0.0 Hours.** Class-280.0. Clinical-0.0. Lab-0.0. Work-0.0

A Certified Dietary Manager, Certified Food Protection Professional (CDM, CFPP) is responsible for the management of food operations in a dietary department. This includes the management of food service personnel, food/kitchen supplies and the routine nutritional aspects of food service. Working with a Registered Dietitian, the dietary manager assists in providing quality nutritional care. The Nutrition and Food Service Professional program at Central Piedmont Community College is approved by the Association of Nutrition & Foodservice Professionals (ANFP) This program is designed for students who are looking for a career change, or are currently employed in foodservice but aspire to be credentialed as a Certified Dietary Manager, Certified Food Protection Professional. (CDM, CFPP) The curriculum focuses on the fundamentals of culinary science, sanitation, nutrition, and sound management practices. Students are eligible for student ANFP Pre-Professional membership. Graduates may apply to sit for the credentialing exam, active ANFP membership, and upon successfully completing the exam may use the CDM, CFPP credential after their name. ([www.anfponline.org](http://www.anfponline.org)). This educational model for the Nutrition and Food Service Professional program consists of two modules in 12 months, with courses held in the evenings at a Central Piedmont campus. HEA 7317 Food Systems Management HEA 7318 Medical Nutrition Therapy Fifty (50) field hours are required per each class. A Registered Dietitian must supervise field hours for HEA 7318 Medical Nutrition Therapy and a CDM or RD must supervise hours for the HEA 7317 Food Systems Management. Benefits of becoming a Certified Dietary Manager DM, CFPPs are experts at managing dietary operations. They are trained and qualified to administrate menus, food purchasing, and food preparation; and to apply nutrition principles, document nutrition information, ensure food safety, manage work teams, and much more. According to the Association of Nutrition and Foodservice Professionals 2012 Salary & Benefits Survey the range was from \$36,401 to \$52,094. It varies according to location of facility, employment status, position, number of employees reporting to you, and geographic region.

**HEA 7318. Medical Nutrition Therapy. 0.0 Hours.** Class-280.0. Clinical-0.0. Lab-0.0. Work-0.0

A Certified Dietary Manager, Certified Food Protection Professional (CDM, CFPP) is responsible for the management of food operations in a dietary department. This includes the management of food service personnel, food/kitchen supplies and the routine nutritional aspects of food service. Working with a Registered Dietitian, the dietary manager assists in providing quality nutritional care. The Nutrition and Food Service Professional program at Central Piedmont Community College is approved by the Association of Nutrition & Foodservice Professionals (ANFP) This program is designed for students who are looking for a career change, or are currently employed in foodservice but aspire to be credentialed as a Certified Dietary Manager, Certified Food Protection Professional. (CDM, CFPP) The curriculum focuses on the fundamentals of culinary science, sanitation, nutrition, and sound management practices. Students are eligible for student ANFP Pre-Professional membership. Graduates may apply to sit for the credentialing exam, active ANFP membership, and upon successfully completing the exam may use the CDM, CFPP credential after their name. ([www.anfponline.org](http://www.anfponline.org)). This educational model for the Nutrition and Food Service Professional program consists of two modules in 12 months, with courses held in the evenings at a Central Piedmont campus. HEA 7317 Food Systems Management HEA 7318 Medical Nutrition Therapy Fifty (50) field hours are required per each class. A Registered Dietitian must supervise field hours for HEA 7318 Medical Nutrition Therapy and a CDM or RD must supervise hours for the HEA 7317 Food Systems Management. Benefits of becoming a Certified Dietary Manager DM, CFPPs are experts at managing dietary operations. They are trained and qualified to administrate menus, food purchasing, and food preparation; and to apply nutrition principles, document nutrition information, ensure food safety, manage work teams, and much more. According to the Association of Nutrition and Foodservice Professionals 2012 Salary & Benefits Survey the range was from \$36,401 to \$52,094. It varies according to location of facility, employment status, position, number of employees reporting to you, and geographic region.

**HEA 7319. Sanitation: Servsafe Certification. 0.0 Hours.** Class-280.0. Clinical-0.0. Lab-0.0. Work-0.0

ServSafe is the National Restaurant Association Educational Foundation's food safety program. Its focus is upon the food service leader's role in measuring risks, setting policies, and training and supervising employees.

**HEA 7320. Hospital Nursing Unit Secretary. 0.0 Hours.** Class-164.0. Clinical-0.0. Lab-0.0. Work-0.0

This course is designed to prepare individuals to perform competently as a secretary on a nursing unit. Students will learn and perform various clerical procedures such as telephone techniques, physician order interpretation, maintenance of the patient's chart, scheduling appointments and requesting supplies and/or equipment.

**HEA 7326. Hospital Nursing Unit Secretary Part 2. 0.0 Hours.** Class-330.0. Clinical-0.0. Lab-0.0. Work-0.0

Course is designed to teach hospital nursing unit secretary skills such as physician order interpretation, medical chart management, and orientation to a nursing unit. Prerequisite or corequisite HEA 7254 and keyboarding at 35 wpm.

**HEA 7330. Spanish for Healthcare Workers. 0.0 Hours.** Class-66.0. Clinical-0.0. Lab-0.0. Work-0.0

Designed as a basic Spanish class for healthcare workers. This course will cover basic vocabulary of greetings, daily living activities and anatomical features.



**HEA 7344. Advanced Medical Life Support. 0.0 Hours.** Class-33.0. Clinical-0.0. Lab-0.0. Work-0.0

AMLS is a two-day (16-hour) in-depth study of medical emergencies. This course emphasizes a pragmatic approach and format, based on teaching providers what they need to know.

**HEA 7345. AMLS Instructor Course. 0.0 Hours.** Class-33.0. Clinical-0.0. Lab-0.0. Work-0.0

This mandated class covers the material needed to prepare an individual to instruct in an AMLS class. This class meets the NAEMT requirements.

**HEA 7400. Advanced Transcription. 0.0 Hours.** Class-176.0. Clinical-0.0. Lab-0.0. Work-0.0

Uses advanced transcription tapes to fully prepare students for entry into the job market as a medical transcriptionist.

**HEA 7401. Medical Transcriptionist. 0.0 Hours.** Class-176.0. Clinical-0.0. Lab-0.0. Work-0.0

Students learn basic medical transcription skills using a Dictaphone and computer keyboarding.

**HEA 7405. Medical Transcription Formatting/Editing. 0.0 Hours.** Class-176.0. Clinical-0.0. Lab-0.0. Work-0.0

This course will prepare students with research skills, proofreading and editing ability, and also formatting of material to be transcribed. Provides students with more specialized terms related to the medical field as well as commonly confused terms, misspelled words, punctuation, grammar, and style guidelines of transcription. Familiarizes students with Microsoft Word as used by transcriptionists, including shortcuts and formatting.

**HEA 7500. Medical Reimbursement Specialist Part I. 0.0 Hours.** Class-60.0. Clinical-0.0. Lab-0.0. Work-0.0

This course is designed to prepare individuals to work in the healthcare field as a billing specialist. Part I includes medical terminology, disease process, basics of medical insurance, insurance terminology, legalities, ethics and parts of a medical record.

**HEA 7625. Medical Keyboarding. 0.0 Hours.** Class-60.0. Clinical-0.0. Lab-0.0. Work-0.0

Provides a basic keyboarding course designed for persons entering a healthcare field.

**HEA 7630. Medical Receptionist. 0.0 Hours.** Class-164.0. Clinical-0.0. Lab-0.0. Work-0.0

Designed for students who want to work in a physician's office performing front-desk receptionist skills such as appointment scheduling and medical records management.

**HEA 7631. Diseases and Pharmacology. 0.0 Hours.** Class-27.0. Clinical-0.0. Lab-0.0. Work-0.0

Provides basic information about common diseases and their treatment as well as commonly prescribed drugs. Course is designed as a follow-up for medical terminology for students preparing for courses in medical information training.

**HEA 7700. Sleep Technologist. 0.0 Hours.** Class-104.0. Clinical-0.0. Lab-0.0. Work-0.0

Prerequisite: Must take test 452, be a HS graduate and have departmental permission. This program will train students to become a sleep technologist in a hospital and/or sleep center.

**HEA 7701. Introduction to Health Occupations for ESL Students. 0.0 Hours.** Class-40.0. Clinical-0.0. Lab-0.0. Work-0.0

Students will improve their communication in the workplace and literacy skills needed for workplace training through an overview of health care with a focus on the nursing assistant profession. Students will demonstrate the ability to use efficient learning techniques as well as acquire, evaluate, analyze and communicate information.

**HEA 7800. Computer Software for the Medical Office. 0.0 Hours.** Class-176.0. Clinical-0.0. Lab-0.0. Work-0.0

This course is designed to introduce students to software applications in the medical office. Students will learn valuable skills including medical billing, scheduling, report generation, patient data input, computer utilities and software vocabulary.

**HEA 7936. Pediatric Advanced Life Support. 0.0 Hours.** Class-16.0. Clinical-0.0. Lab-0.0. Work-0.0

The Pediatric Advanced Life Support [PALS] Course is designed to certify physicians, registered nurses or EMT- Paramedics in Pediatric Advanced Life Support through the American Heart Association. This course teaches the proper evaluation and treatment of a pediatric patient in cardiopulmonary arrest. Upon successful completion, the student will be awarded PALS certification from the American Heart Association. Prerequisite: AHA BLS and ACLS\* \*It is desirable but not required that an ACLS certification be held.

**HEA 7944. Advanced Cardiac Life Support. 0.0 Hours.** Class-20.0. Clinical-0.0. Lab-0.0. Work-0.0

The Advanced Cardiac Life Support [ACLS] Course is designed to certify physicians, registered nurses or EMT- Paramedics in Advanced Cardiac Life Support through the American Heart Association. This course teaches the proper evaluation and treatment of an Adult patient in cardiopulmonary arrest. Upon successful completion, the student will be awarded ACLS certification from the American Heart Association. Prerequisite: Current AHA BLS Certification as a Healthcare Provider.

**HEA 8020. Medical Keyboarding. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This course is designed as a basic keyboarding program intended for persons entering a healthcare field. The keyboarding practice utilizes some medical terms.

**HEA 8025. Medical Office Terminology /Admin. Pro. Administrative Procedures. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This course is designed for students who want to work in a physician's office doing front desk receptionist work, appointment scheduling and medical records management. Medical terminology of all body systems is included.

**HEA 8030. Medical Keyboarding and Receptionist Skills. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This course is designed for students who need basic keyboarding skills and front office medical reception skills.

**HEA 8040. Sleep Technologist. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This course is designed to train individuals to become a sleep technologist in a hospital and/or sleep center. Students will learn appropriate sleep terminology with anatomy and physiology, introduction to PC, CPR, and clinical aspects of sleep.

**HEA 8045. Hospital Coding. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This course will give students instruction in ICD-9-CM Diagnosis code assignments for hospital (in-patient) records. Students should have basic coding skills before entering this course.

**HEA 8046. Medical Billing and Reimbursement. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This course is designed to teach students the fundamental skills necessary to perform medical billing in today's managed care environment.



**HEA 8047. Medical Reimbursement Specialist. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This course is designed to prepare participants in the basics of ICD-9-CM and CPT-4 Coding, HCFA 1500 Forms, insurance basics and collections.

**HEA 8051. Cancer Prevention and Early Detection. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

**HEA 8052. Dietary Manager Distance Learning Course. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

The dietary manager distance learning course is designed to allow participants to learn through self study and guided direction at home. Requirements include 140 hours of study and 150 hours of clinical preceptorship. All work is supervised by a registered dietitian. Upon completion of the course, participants are eligible for national Exam cert. Diet. Mgr.

**HEA 8056. Medical Transcription I. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This course consists of extensive medical terminology and anatomy that is needed to prepare the student to transcribe medical reports. It also includes keyboarding. Students must be able to type 45 wpm at the end of the course.

**HEA 8057. Medical Transcription II. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

Medical transcription II is a continuation of medical transcription I with the emphasis being on increased keyboarding speed and transcribing speed.

**HEA 8058. Medical Insurance Billing. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This course is designed to teach individuals the fundamental skills necessary to perform medical billing in today's managed care environment.

**HEA 8059. Understanding Medical Insurance. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

Students taking this course will learn a basic knowledge of medical insurance, including medical insurance, medicare/Medical info, and understanding of claim forms.

**HEA 8060. Basic Icd-9-Cm Coding. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

A course designed to introduce ICD-9-CM coding to individuals who have not had formal training in format and coding guidelines, and also to be a refresher course for individuals who have not used coding for a period of time.

**HEA 8061. Basic Spanish for Health Care. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This is a 14 hour introductory Spanish course for health care providers.

**HEA 8062. Medical Reimbursement Specialist Part 1. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This course is designed to prepare individuals to work in the healthcare field as billing specialist. Part I includes medical terminology, disease process, basics of medical insurance, insurance terminology, legalities, ethics, and the parts of a medical record.

**HEA 8063. Medical Reimbursement Specialist- II. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

Course covers all aspects of coding and insurance billing procedures.

**HEA 8065. Certified Precedural Coder (CPC) Exam Review. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

A review of ICD-9-CM and CPT medical codes for students wanting to take the CPC Exam.

**HEA 8235. Neonatal Resuscitation Course. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This class is for healthcare providers. Textbook Required.

**HEA 8236. Neonatal Resuscitation Instructor. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

Prerequisite: Must have current NRP provider certification. Textbook required.

**HEA 8237. Pediatric Advanced Life Support. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

Textbook Required.

**HEA 8242. BLS Instructor Update Course. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This course is a mandatory update from American Heart Association for approved basic life support instructors to address new standards for basic life support instruction.

**HEA 8243. CPR Instructor. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

Textbook Required. Must have current AHA Healthcare CPR card.

**HEA 8244. Advanced Cardiac Life Support. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

Textbook Required. Prerequisite: knowledge of cardiac rhythms and medications.

**HEA 8247. Pediatric Advanced Life Support Renewal. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

Textbook required. Must have current NRP certifications.

**HEA 8248. Pediatric Advanced Life Support Instructor Course. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

Textbook required. Must have current PALS provider card.

**HEA 8249. Advanced Cardiac Life Support - Renewal. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

Textbook Required.

**HEA 8272. Advanced Cardiac Life Support Instructor Course. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

Textbook Required. Must have current ACLS provider card.

**HEA 8273. Physical Therapy Workshop. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

Workshop designed to meet continuing education needs of physical therapists, physical therapists assistants, and occupational therapist. Topics vary and relate to the practice of the specialties. Examples of topics include: Proprioceptive Neuromuscular facilitation I, Neuro-clinical applications of PNF, Functional Gait: Component Assessment and Treatment, and Back Education and Training.

**HEA 8301. Common Sense About Feeling Tense. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This health promotion program focuses on educating participants on the effects of stress and provides suggestions for stress management and behavioral modification.

**HEA 8302. Cardiovascular Risk Factor Education Program. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This course is an inter-Disciplinary program targeted to health care professionals. It is designed to identify, counsel, and treat patients who have risk factors for heart disease and stroke. The primary focus is high cholesterol and hypertension.

**HEA 8303. Stroke: What Every Person Needs to Know. 0.0 Hours.**

Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This program helps educate patients and other community members on the causes and effects of stroke. the focus of the course is on facts. Supportive care for the stroke patient outlines the caregiver's and patient's needs.

**HEA 8304. Dietary Manager Certification Exam Review. 0.0 Hours.**

Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This course serves as a review for current and past dietary manager students to help prepare them to sit for the dietary manager national certification exam.

**HEA 8306. Servsafe Re-Certification. 0.0 Hours. Class-440.0.**

Clinical-0.0. Lab-0.0. Work-0.0

Servesafe is the National Restaurant Association Education Foundation's food safety program. The course is accepted in most jurisdictions that require training for food safety. This re-certification course involves a short review and the SERVSAFE exam.

**HEA 8311. Optometric Technician. 0.0 Hours. Class-440.0. Clinical-0.0.**

Lab-0.0. Work-0.0

This course is designed to provide participants with the skills necessary to function in the capacity of technician within an optometric or ophthalmic practice.

**HEA 8316. ANFP Certification Exam Review. 0.0 Hours. Class-440.0.**

Clinical-0.0. Lab-0.0. Work-0.0

This certification exam course reviews the material taught in each of the three training program courses - Medical Nutrition Therapy, Food Systems Management and ServSafe Manager. Eligibility to take the exam requires successful completion of the three courses. The exam is offered through the Association of Nutrition and Foodservice Professionals at designated locations. Upon passing the exam, the student will have earned the title of Certified Dietary Manager, Certified Food Protection Professional (CDM, CFPP).

**HEA 8340. Holistic Health - Feel Better, Look Better!. 0.0 Hours.**

Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

Unhappy? Overweight? Stressed? Sleep Deprived? Would you like more energy, less weight and fewer aches and pains? You know you should live more healthfully, but where do you begin? Diet, exercise, sleep, environmental toxins - all the headlines, conflicting studies, and trendy diets can be overwhelming. The premise of a holistic approach is to give the body what it needs and it will keep itself disease and symptom-free. Come learn simple, practical tools to help you quickly and easily adopt healthier habits in your day-to-day life. This 12-week interactive course provides sensible strategies to get your life "on track." It will include healthy cooking demos and taste testing. It will help also you create a personalized path to greater wellbeing.

**HEA 8601. Clinical Supervision in Substance Use Disorder Treatment Settings. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0**

This course is designed for the novice or aspiring supervisor working in a substance use disorders treatment setting. This introductory level training will provide information on the fundamentals of clinical supervision and the additional challenges of supervising in a SUD treatment setting. Application has been made to the NCSAPPB for 6 hours of supervision specific (CSI/CCS) training.

**HEA 8602. Technology Based Clinical Supervision and Ethical Dilemmas in the Digital Age. 0.0 Hours. Class-440.0. Clinical-0.0.**

Lab-0.0. Work-0.0

This course will familiarize Clinical Supervisors with technology-based clinical supervision (TBCS). Topics include research, demonstration of its utility, and opportunities to observe and practice delivery of clinical supervision services using different types of technology. This course will also cover more broadly ethical dilemmas that arise when using all types of technology to provide services and/or clinical supervision.

**HEA 8801. Medication Aide. 0.0 Hours. Class-440.0. Clinical-0.0.**

Lab-0.0. Work-0.0

This is a 6 week (24 hours) Medication Aide course. This course is designed to prepare the student to be a Medication Aide in the Long Term Care/Skilled Nursing facility. Topics include the six rights of medication administration for non-licensed personnel, medication administration via the oral, topical and instillation routes, medical asepsis, hand hygiene, terminology, and legal implications. Upon completion, students should be able to take the competency exam and demonstrate skills necessary to qualify for listing on the North Carolina Medication Aide Registry.

**HEA 8901. Medication Technician. 0.0 Hours. Class-440.0. Clinical-0.0.**

Lab-0.0. Work-0.0

Course provides basic training in monitoring and clinical practices needed to safely administer medications. Must be 18 years old to register for course.

**HEA 8902. Asperger's Syndrome & Psychiatric Disabilities in Higher Ed.. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0**

This course number may be used to report any occupational extension course that is funded with receipts, and that will not generate budget FTE.

**HEA 8926. Primary Aerobic Instructor Certification. 0.0 Hours.**

Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This course is designed to certify aerobic instructors in primary aerobics through the american aerobics association. Class includes: aerobic class structure and design, anatomy and physiology, injury prevention, workout, muscle physiology, emergency procedures, cardiovascular physiology, and certification exam.

**HEA 8927. Step Aerobic Instructor Certification. 0.0 Hours.**

Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This course is designed to certify aerobic instructors in step aerobics through the american aerobics association. the course includes: step safety guidelines, injury prevention spri stop straps, workout, upper body anatomy, propulsion and plyometrics, certification exams.

**HEA 8928. Sprots Nutrition Consultant Certification. 0.0 Hours.**

Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This course is designed to certify individual as a sports nutrition consultant through the american aerobics association. Course includes: setting goals, energetics, designing your diet, carb loading, sports specific nutrition and certification exam.

**HEA 8929. Personal Fitness Trainer Certification. 0.0 Hours.**

Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This course is designed to certify individuals as personal fitness trainers through the american aerobics association. Course includes strength conditioning, cross training, fitness testing, body composition, injury prevention, designing fitness programs and certification exam.

**HEA 8930. Exploring Medical Language. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This course is designed to allow students to master medical language quickly and easily. Word parts are taught according to body systems. Medical terms not built from word parts are learned. Anatomical terms for each body system are included.

**HEA 8932. Exploring Medical Language Part II. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This course is designed to allow students to master medical language quickly and easily. Word parts are taught according to body systems. Medical terms not built from word parts are learned. Anatomical terms for each body system are included.

**HEA 8956. CPR-Adult/Infant/Child/American Heart Association. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This class is intended for licensed and certified healthcare professionals.

**HEA 8957. Cpr/Adult-Renewal-Aha. 0.0 Hours.** Class-12.0. Clinical-0.0. Lab-0.0. Work-0.0

Review and update on cpr material and manikin practice. Includes written test and satisfactory performance of one- rescuer cpr.

**HEA 8958. CPR-Adult-American Heart Association. 0.0 Hours.**

Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

One person CPR is a basic life-saving technique for sudden cardiac arrest. Obstructed airway and rescue breathing are also included. Textbook and pocket mask required. This class is for the general public.

**HEA 8960. 1st Aid & Infant/Child Cardiopulmonary Resuscitation-American Heart Association. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

Textbook Required. Basic emergency care for the general public.

**HEA 8963. American Heart Association First Aid/ CPR/AED. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

The AHA Heartsaver First Aid/ CPR/ AED Course is taught by an instructor who is affiliated with, and authorized to teach by, the American Heart Association. Participants will learn: First aid basics Recognition of Medical emergencies Recognition of Injury emergencies Recognition of Environmental emergencies Adult CPR and AED use Adult choking (foreign body airway obstruction) Child CPR and AED use (optional) Infant CPR (optional) Child choking (optional) Infant choking (optional) CPR instruction includes high-quality compressions, airway management, breathing, and how to use a mask. First Aid instruction includes bandaging, bleeding, wounds, choking, shock, seizure, fainting, broken bones, sprains, burns, bites, stings, poison, and temperature-related conditions. Successful completion of the Heartsaver First Aid CPR AED Course includes three parts.

**HEA 8964. First Aid and Cpr-Adult-Renewal. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

Review of standard first aid skills and recertification in ability to perform cpr. the first aid course teaches the standard skills the student needs in order to act as the first link in the ems system. Includes such subjects as bleeding, burns, fractures and strokes. the cpr is a review of choking and rescue breathing skills.

**HEA 8965. CPR/Cardiopulmonary Resuscitation - AHA American Heart Association. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

Course provides instruction and practice in techniques of infant and child cardiopulmonary resuscitation, rescue breathing and airway obstruction. Textbook required. This class is for the general public and daycare workers who attend children ages 1-8.

**HEA 8966. 1st Aid/Cpr Adult/Int/Child. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

Covers basic first aid and CPR for all ages.

**HEA 8969. First Aid/Adult. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This course teaches the standard first aid skills the student needs in order to act as the first link in the EMS system. Includes such subjects as bleeding, burns, fractures and strokes.

**HEA 8971. First Aid-Infant/Child. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This course is designed to teach basic first aid skills needed to care for an injured child.

**HEA 8982. CPR-Adlt/Inf/Chld-AHA-Renewal. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This class is intended for licensed and certified healthcare professionals.

**HEA 8990. Health Unit Coordinator Review for Certification. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

**HEA 8991. First Aid Instructor. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This course is designed to teach the skills necessary to instruct others to teach first aid skills and knowledge. the focus is on methodology and learning styles.

**HEA 8995. Chiropractic Assistant's 50 Hr. Basic X-ray. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This course provides the chiropractic assistant with knowledge and understanding of the radiologic procedures relative to the practice of chiropractic. the student will be able to assist the doctor of chiropractic in taking and processing x-rays of the appendicular and arial skeleton.

**HEA 8996. Physical Assessment for Health Care Professionals. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This course is designed as an introduction to history taking and physical exam. Course is taught as an overview of history and physical for health care professionals.

**HEA 8997. Public Access Defibrillation. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This course is designed to prepare the student to apply an automatic/ Semi- automatic defibrillator to a pulseless and breathless patient. The student may be trained in healthcare or be a layperson. At the completion of this class, the student will be able to: explain defibrillation and the role of CPR and correctly operate an automatic/Simi-Automatic defibrillator. (pre-Requisite: adult cpr or healthcare provider cpr.).

**HEA 8998. CPR Adult/Infant/Child Heartsaver. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

Textbook and pocket mask required. This class is for the general public and daycare workers.

**HEA 8999. Heartsaver CPR Adult, Infant, Child Renewal. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

Two-year credential (card). The Heartsaver CPR Adult, Infant, Child Renewal course is designed to review CPR and relief of foreign body airway obstruction to lay rescuers that are expected to respond to emergencies in the workplace. It is specifically designed for lay rescuers who are required to obtain a course completion card. Current textbook and pocket mask required.

## Health Information Technology (HIT)

This program is offered entirely online with the exception of Professional Practice Experience courses. For complete details about the program, contact the Health Information Technology Department at 704.330.6162 or visit the Health Information Technology website.

The Health Information Technology (HIT) curriculum prepares individuals with the knowledge and skills to process, analyze, abstract, compile, maintain, manage, and report health information. The HIT Program at CPEC is fully accredited by CAHIIM - Commission on Accreditation for Health Informatics and Information Management Education.

Graduates of the program receive an Associate in Applied Science degree and are eligible to write the national certification examination to become a Registered Health Information Technician (RHIT). RHITs work in supervisory and technical positions throughout health care—analyzing and managing health information.

**HIT 7000. ICD-10 Medical Coding. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

ICD-10 is an upgraded diagnostic and procedural medical coding system that, by law, must be implemented throughout the healthcare industry by October 1, 2014. Because this new system is radically different, it's important to prepare now. This online program offers you comprehensive, robust training in diagnostic and procedural coding, using the ICD-10-CM (diagnostic) and ICD-10-PCS (procedural) coding manuals. You will get detailed instructions for using the coding manuals, understanding the coding guidelines, and accurately applying the ICD-10 coding steps. There are more than 40 quizzes and exams for diagnoses and procedures by body system to test your knowledge and understanding. This program is for anyone in the healthcare industry who wants to master ICD-10 medical coding. Offered in partnership with ed2go. Textbooks included. Some knowledge of medical terminology is required. Education in anatomy and physiology is strongly recommended, but not required.

## Heavy Equipment Maintenance (HET)

**HET 7115. Electronic Engines. 0.0 Hours.** Class-330.0. Clinical-0.0. Lab-0.0. Work-0.0

This course introduces the principles of electronically controlled diesel engines. Emphasis is placed on testing and adjusting diesel engines in accordance with manufacturer's specifications. Upon completion, students should be able to diagnose, test, and calibrate electronically controlled diesel engines.

**HET 7128. Medium/Heavy Duty Tuneup. 0.0 Hours.** Class-330.0. Clinical-0.0. Lab-0.0. Work-0.0

This course introduces tune-up and troubleshooting according to manufacturers' specifications. Topics include troubleshooting engine systems, tune-up procedures, and use and care of special test tools and equipment. Upon completion, students should be able to troubleshoot, diagnose, and repair engines and components using appropriate diagnostic equipment.

## Horticulture (HOR)

**HOR 7011. ISA Certified Arborist Exam Review Course. 0.0 Hours.**

Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This 2 day course will better prepare students to sit for the ISA Certified Arborist Examination. All sixteen (16) domains of the exam will be reviewed: Safety, Biology, Soils, Water, Fertilization, Working in Trees, Pruning, Tree Support Systems, Tree ID, Tree Selection, Installation, Assessment, Diagnosis, Plant Health Care, Trees & Construction and Urban Forestry. Students should have read and studied Arborist' Certification Study Guide - Sharon Lilly (ISBN 978-1-881956-69-3) prior to attending this class. Please note: This is an Exam Prep course only. Students must register separately for the ISA Certified Arborist Examination.

**HOR 7012. North Carolina Landscape Contractors' Exam Review**

**Class. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This 15-hour class, held over three evenings, will better prepare students to sit for the North Carolina Landscape Contractors' Examination. The material included in the general landscaping multiple choice exam and the Landscape Design exam will be covered; the plant ID portion is not included. Students should have read and studied the North Carolina Landscape Contractors Registration Board Study Manual which is available through NCLCRB at [nclcrb@nclcrb.org](mailto:nclcrb@nclcrb.org). Please note: This is an exam prep course only. Students must contact the NCLCRB for the exam registration.

**HOR 7013. North Carolina Department of Agriculture Pesticide Applicators' Exam Review Class. 0.0 Hours.** Class-440.0. Clinical-0.0.

Lab-0.0. Work-0.0

This eight-hour class will better prepare students to sit for the North Carolina Department of Agriculture Pesticide Applicators' Examination. The material included on the CORE and Ornamentals & Turfgrass Pest Control exams will be covered. Students should have read and studied the three manuals: Applying Pesticides Correctly, N.C. Pesticide Laws & Regulations, and Ornamentals & Turfgrass Pest Control (available from [http://www.agr.state.nc.us/SPCAP/pesticides/CATEGE\\_XP.HTM](http://www.agr.state.nc.us/SPCAP/pesticides/CATEGE_XP.HTM)). Please note: This is an exam prep course only. Students must contact the North Carolina Dept. of Agriculture for the exam registration (919.733.3556).

**HOR 7014. Greenhouse & Landscape Skills. 0.0 Hours.** Class-330.0.

Clinical-0.0. Lab-0.0. Work-0.0

This course covers the basic fundamentals of applied botany, plant identification, propagation, greenhouse operation, landscape installation and maintenance. Students will master many of the skills necessary to qualify for entry level positions in the horticulture field.

**HOR 7142. Fruit and Vegetable Production. 0.0 Hours.** Class-440.0.

Clinical-0.0. Lab-0.0. Work-0.0

This course introduces the principles and techniques of growing fruits and field-grown vegetables. Topics include site selection, proper varietal selection, nutritional values, cultural techniques, harvesting and marketing, and insect and disease control. Required textbook: 2019 Vegetable Crop Handbook for Southeastern United States.



## Information Systems Security (SEC)

**SEC 7000. Series 7 Exam Prep. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

Pass the Series 7 licensing exam, with our intensive 5-day review course. Our live course is designed to make your prep-time more productive and help you to understand difficult material. Securities experts deliver material in a concise and easy-to-understand manner, while providing important topical insight and valuable exam tips and strategies. A Series 7 license qualifies a candidate for the solicitation, purchase, and/or sale of all securities products, including corporate securities, municipal securities, municipal fund securities, options, direct participation programs, investment company products, and variable contracts. To take the Series 7 examination, you must be sponsored by a member firm of FINRA or a self-regulatory organization such as an exchange or state regulator.

## International Business (INT)

**INT 7210. Certified Global Business Professional. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

Start out strong or demonstrate your knowledge in international business by preparing for the credential by exam designation of Certified Global Business Professional (CGBP). Offered by the North American Small Business International Trade Educators Association (NASBITE), this credential provides a benchmark for competency in global commerce. It can give you the recognition you deserve and demonstrate your commitment to professional development. The prep and exam cover four areas: global management, global marketing, supply chain management, and trade finance. This program is for you if you're a NASBITE member, work in a large or small company with global interests, or a practitioner, an educator or a student engaged in international trade and global commerce. The credential is also suitable if you work in trade-assistance organizations, trade-promotion agencies and related educational institutions. Offered in partnership with ed2go.

**INT 8003. Certified Export Specialist (CES) Certification Program. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

The National Customs Brokers & Forwarders Association of America (NCBFAA)'s Certified Export Specialist (CES) Certification Program is built upon a set of key export regulatory requirements and legislation. It provides the technical competency necessary to deliver services and exporting solutions in the freight forwarding industry. Equipped with this certification, professionals will become competent and knowledgeable in current export regulations and render trade services that benefit both their company and/or clients.

**INT 8004. Certified Customs Specialist (CES) Certification Program. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

The National Customs Brokers and Forwarders Association of America (NCBFAA)'s Certified Customs Specialist (CCS) Certification Program is designed to assist trade professionals involved in the import industry to become experts in the current import regulations. Whether you have a broker's license or you have just a year or two of related experience, this course will provide you with a solid foundation for you to increase your industry knowledge. The CCS course will review fundamental points relevant to the importation process while delving into practical, relevant subject matter not generally tested on the formal Customs licensing exam. Each topic will help you grow and develop as an import professional. You will find that participating in the CCS program will provide you numerous venues for honing your professional skills while continuing to stay up with the rapidly changing marketplace within import industry.

## Journalism (JOU)

**JOU 7005. Beginner's Guide to Getting Published. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This comprehensive course will help you guide your work directly into the hands of an editor and onto the shelves of your favorite stores. Taught by a successful journalist and author, this course will walk you through every step of the publishing process. Have all of your questions answered about important legal issues, including copyright, agents and the use of pseudonyms.

**JOU 7006. Publish and Sell Your E-Books. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

Learn how to use free tools to turn your manuscript into a professionally published e-book ready for distribution. Or, if you don't consider yourself a techie, this course will give you the information you need to select the right publishing services to help you as you convert your manuscript so you're ready to sell it as an e-book. Discover the tricks of the trade used by traditional publishers to make sure their books are in the best position to be found by readers.

**JOU 7007. Writing for Children. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

Join author and writing mentor Steve Alcorn and discover what you need to know to write for children. If you're a beginning writer, this course will help you transform your book idea into a finished product that could potentially land in the hands of an editor or agent. And if you're already a successful writer, this course will help you explore new opportunities and markets for your work.

**JOU 7010. Research Methods for Writers. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

Attention all writers! Learn how to efficiently and effectively conduct research for any writing project: fiction, nonfiction, business . . . even term papers and dissertations. Modern research techniques are boundless. The trick is to know where to look and what to look for. This six-week online course teaches the best methods for mounting a search on any subject.

**JOU 7012. Write and Publish Your Nonfiction Book. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

One of the great things about nonfiction book writing is that you're 10 times more likely to get published than you'd be if you wrote fiction. Whether you dream of becoming a full-time author, writing books to advance your career, or penning your memoir or family history, this fun and information-packed course will teach you how to plan, research, write, edit, and publish your masterpiece.

**JOU 7013. Writeriffic: Creativity Training for Writers. 0.0 Hours.**

Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

Who doesn't know the fear of the blank page? How can we transform our visions into the written word? Is it really possible to become a terrific writer? You'll find the answer to these and more of your questions in *Writeriffic*. In this high-energy class you'll learn lots of tricks from the published writer's toolbox. Whether you're at work now or hoping to write a novel, a nonfiction book, a memoir, short stories or articles, *Writeriffic* liberates the imaginative, inventive bolts of genius that are inside everyone. If you've ever dreamed of hearing your writer's voice and writing what's in your heart and head, this class will make it happen.

**JOU 7014. Writing Essentials. 0.0 Hours.**

Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

Master the essentials of writing, and become the stellar wordsmith you always wanted to be! In this course, you'll develop the skills you need to excel at business communications, express yourself clearly online, and take your creative literary talents to a new level. Whether you're hoping to get a better job, write for a blog, or publish your short story, this course will give you the writing tools you need for success. It's also a perfect choice for students who speak English as a second language.

**JOU 7110. Introduction to Journaling. 0.0 Hours.**

Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

If you've ever wanted to try journaling, this course will provide answers to your every question. You'll discover the different types of journaling (including dream journaling), and sample a buffet of journaling techniques, exercises, tools, and resources. We'll cover everything you need to know about journaling, including a seven-step process that will ease you into writing a journal, even if you've never journaled before. You'll get detailed instructions on developing, decorating, and customizing your journal, and you'll learn exciting new ways to express yourself and develop your creativity. You'll find out how you can use your journal to explore your thoughts, feelings, and values, and you'll learn how to use your journal to support you as you develop true emotional well-being. You'll also understand how journaling can ease the stress of unwanted change throughout the course of your life. You'll even discover how journaling can help you choose the best career for you or advance in your current career. Offered in partnership with ed2go.

**JOU 8113. Advanced Creative Writing: Creativity Taken to the Next Level. 0.0 Hours.**

Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

Do you have a fiction or nonfiction story in the making? Are you feeling a bit uncertain about how to pull it together? Then this course is for you! You will examine the details of your creation and get tips on every facet of crafting a story, including structure, theme, motif, opening and more. With careful attention to detail your story will come alive. Learn how to create a page-turner that touches your reader's heart. Class time will include lecture, discussion and writing exercises.

**JOU 8114. Creative Writing. 0.0 Hours.**

Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

Are you ready to test the waters of creative writing but not sure where to start or how? Maybe you've written before, but long ago. Or, maybe you never had an opportunity to learn. This course will guide you as you let your creative thoughts roam. You will get tips on craft and practice as you use various imagination-stretching exercises, then write through in-class readings, discussions and assignments, to build upon those ideas. This course will focus on fiction, creative nonfiction and depending on interest, poetry as a means to enhancing and structuring your writings. Best of all: no exams or grades to worry about!

**JOU 8115. Telling Your Story - The Personal Essay and the Essence of Memories. 0.0 Hours.**

Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

Have you ever looked at your life and wondered how to make sense of it? We all have. Writing forces us to think through our life experiences, one sentence at a time. In the process, memories become coherent and we find a sense of purpose. This class will show you how to write about something that matters to you, whether a favorite relative, or a lesson learned through personal hardship or happier times. You'll learn how to turn an idea into an essay or story and at the end of six weeks, you'll have a written work to share.

**JOU 8158. Introduction to Screenwriting. 0.0 Hours.**

Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

Whether you want to write micro-budget indie films or Hollywood blockbusters, this course will teach you how to create a script that can sell. Start with the fundamentals and how to develop that tiny spark into a story, and finally how to structure it into a screenplay. You'll also get an inside look into the business of selling your script and building your career as a writer.

**JOU 8400. Write Your Life Story. 0.0 Hours.**

Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

If you've ever thought about writing your life story, now is the time. You will have the satisfaction of telling history your way. This course walks you step-by-step through the process of writing your life story. It's fun. It's exciting. It's a story only you can tell.

**JOU 8401. The Keys to Effective Editing. 0.0 Hours.**

Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

From the language of editing to grammar, punctuation, and syntax to the all-important relationships between editor, author, and publisher, every facet of editing will be explored in this copyeditor course. Online editing is gaining popularity; its complexities will be unraveled and its advantages and pitfalls explored.

## Machining (MAC)

**MAC 7000. Introduction to Metrology. 0.0 Hours.**

Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This course introduces the care and use of precision instruments. Emphasis is placed on the inspection of machine parts and use of a wide variety of measuring instruments. Upon completion, students should be able to demonstrate the correct use of measuring instruments.

**MAC 7001. Overview of Metrology. 0.0 Hours.**

Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This course introduces the care and use of precision instruments. Emphasis is placed on the inspection of machine parts and use of a wide variety of measuring instruments. Upon completion, students should be able to demonstrate the correct use of measuring instruments.

**MAC 7114. Metrology Reading. 0.0 Hours.**

Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

8-hour introduction to concepts of metrology with instructor demonstration, and hands-on use of common precision measuring instruments.

**MAC 7115. Metrology II. 0.0 Hours.**

Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This course covers the principles and techniques of modern practical metrology and inspection methods using metric specifications and metric tools.

**MAC 7116. Metrics & Metrology. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This course introduces the combined concepts of metrics and metrology with instructor demonstration, and hands-on use of common precision measuring instruments while working on mathematical formulas and tables.

**MAC 7117. Metric Metrology. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This course covers basic principles of Metric Metrology with instructor demonstration and hands-on use of common precision measuring instruments.

**MAC 7130. Basic Blueprint Reading/Machining. 0.0 Hours.**

Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This course covers basic principles of blueprint reading. Topics include multi-view drawings; interpretation of conventional lines; and dimensions, notes, and thread notation. Upon completion students should be able to interpret basic drawings, visualize parts, and make pictorial sketches.

**MAC 7131. Basic Blue Print Reading Machining Reading. 0.0 Hours.**

Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This course covers the basic principles of blueprinting reading. Topics include: multi-view drawings; interpretation of conventional lines; and dimensions, notes, and thread notation. Upon completion, students should be able to interpret basic drawings, visualize parts, and make pictorial sketches.

**MAC 7132. Blueprint Reading/Machining Part II. 0.0 Hours.**

Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This course includes more complex blueprints. Topics include auxiliary views; sections views; violations of true project and applications of GD&T.

**MAC 7133. Basic Blueprint Reading/Machining. 0.0 Hours.**

Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This course covers basic principles of blueprint reading. Topics include multi-view drawings; interpretation of conventional lines; and dimensions, notes, and thread notation. Upon completion students should be able to interpret basic drawings, visualize parts, and make pictorial sketches.

**MAC 7134. Advanced Blueprint Reading. 0.0 Hours.** Class-440.0.

Clinical-0.0. Lab-0.0. Work-0.0

Upon completion, students should be able to read and interpret complex industrial blueprints.

**MAC 7135. Geometric Dimensioning and Tolerancing. 0.0 Hours.**

Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This course will cover the basics of GD&T including symbology, datums, material modifiers, limits of size, and position tolerancing.

**MAC 7136. Geometric Dimensioning and Tolerancing. 0.0 Hours.**

Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This course covers advanced elements of GD&T including form, orientation, profile, position, coaxial controls, screw thread formulas, and tolerance stackups.

**MAC 7137. Overview of Geometric Dimensioning and Tolerancing. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This course provides an overview of the GDT system, including symbology, material condition, feature control frames, concept of size, effect of modifiers, position tolerancing calculations, datum reference frames; and dimensioning a drawing using GDT principles.

**MAC 7138. Basic Blueprint Reading. 0.0 Hours.** Class-440.0.

Clinical-0.0. Lab-0.0. Work-0.0

This course covers basic principle of blueprint reading. Topics include multi-view drawings; interpretation of conventional lines, and dimensions, notes and thread notation. Upon completion, students should be able to interpret basic drawings, visualize parts, and make pictorial sketches.

**MAC 7139. Geometric Dimensioning & Tolerancing Basics. 0.0 Hours.**

Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This course provides an overview of the GDT system, including symbology, material condition, feature control frames, concept of size, effect of modifiers, position tolerancing calculations, datum reference frames; and dimensioning a drawing using GDT principles.

**MAC 7140. Computer Numerical Control Graphics Programming/ Turning. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This course introduces Computer Numerical Control Graphics Programming and concepts for turning center applications. Emphasis is placed on the interaction of menus to develop a shape file in a graphics CAM system.

**MAC 7141. Advanced GD&T w/Welding & Process Symbols. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This class covers advanced topics in GD&T for contract client Sealed Air. Topics include: Welding and Process Symbols, Form Tolerances, Orientation Tolerances, Profile and Position Tolerances.

**MAC 7151. Basic Shop Math. 0.0 Hours.** Class-440.0. Clinical-0.0.

Lab-0.0. Work-0.0

This course introduces basic calculations as they relate to machining operations. Emphasis is placed on basic calculations and their applications in the machine shop. Upon completion, students should be able to perform basic shop calculations.

**MAC 7152. Manual Lathe Operations. 0.0 Hours.** Class-440.0.

Clinical-0.0. Lab-0.0. Work-0.0

This course introduces students to manual lathe operations as it relates to the metalworking industry.

**MAC 7153. Manual Mill Operations. 0.0 Hours.** Class-440.0. Clinical-0.0.

Lab-0.0. Work-0.0

This course introduces students to manual mill operations as it relates to the metalworking industry.

**MAC 7154. Siemens 5 Axis Mill Training. 0.0 Hours.** Class-440.0.

Clinical-0.0. Lab-0.0. Work-0.0

This course is a comprehensive study of the principles of the design for jigs and fixtures, and the setup and mounting of machining parts to specific specs. Students will examine the study of tool mounting and troubleshooting, and proper clamping techniques. They will also explore the use of standard components and special fixture components.

**MAC 7161. Applied Technology Review. 0.0 Hours.** Class-440.0.

Clinical-0.0. Lab-0.0. Work-0.0

This course is designed as a review of technology terms and principles for industrial applications.

**MAC 8111. Machining Technology 1. 0.0 Hours.** Class-440.0.

Clinical-0.0. Lab-0.0. Work-0.0

This course introduces machining operations as they relate to the metal working industry. Topics include machine shop safety, measuring tools, lathes, drilling machines, saws, bench grinders and layout instruments. Upon completion, students should be able to safely perform the basic operations of measuring, layout, drilling, sawing and turning.

**MAC 8121. Introduction to Computer Numerical Control. 0.0 Hours.**  
Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This course introduces the concepts and capabilities of computer numerical control machine tools. Topics include setup, operation, and basic applications. Upon completion, students should be able to explain operator safety, machine protection, data input, program preparation, and program storage.

## Mathematics (MAT)

**MAT 7010. Review of Data Analysis Tools. 0.0 Hours.** Class-66.0.  
Clinical-0.0. Lab-0.0. Work-0.0

This training is designed to give participants a review of basics such as simple calculations and rounding in preparation for specific instruction in percentages to allow them to calculate percent discounts, increases, decreases and sales margins.

**MAT 7060. Intensive Review of Arithmetic and Pre-Algebra. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

Fast Track 7060 is a fast-paced, intensive review course that covers arithmetic and pre-algebra in a standard instructor/student format. There are no pre-requisites for this course; however, students should have a history of being successful in equivalent levels of math, although they may not recall enough information to do well on the placement test. After successful completion of the class, which includes a graded test, the student will be given pre-requisite permission for MAT 060 or MAT 070 unless granted permission in advance, students are required to take a curriculum math course in the semester immediately following the fast-track class.

**MAT 7070. Intensive Review of Introductory Algebra. 0.0 Hours.**  
Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

Fast Track 7070 is a fast-paced, intensive review course that covers introductory algebra in a standard instructor/student format. To be eligible for the course, a CPT arithmetic score of 55 or completion of MAT 060 with a "C" or better is required. Students should have a history of being successful in equivalent levels of math, although they may not recall enough information to do well on the placement test. After successful completion of the class, which includes a graded test, the student will be given pre-requisite permission for MAT 080 or MAT 140 or MAT 115 unless granted permission in advance, students are required to take a curriculum math course in the semester immediately following the fast-track class.

Prerequisites: Take MAT 060

**MAT 7080. Intensive Review of Intermediate Algebra. 0.0 Hours.**  
Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

Fast Track 7080 is a fast-paced, intensive review course that covers intermediate algebra in a standard instructor/student format. To be eligible for the course, a CPT arithmetic score of 55 and elementary algebra score of 55 or completion of MAT 070 with a "C" or better is required. Students should have a history of being successful in equivalent levels of math, although they may not recall enough information to do well on the placement test. After successful completion of the class, which includes a graded test, the student will be given prerequisite permission for MAT 161 or MAT 171 or MAT 155. Unless granted permission in advance, students are required to take a curriculum math course in the semester immediately following the fast-track class.

Prerequisites: Take MAT 060 MAT 070

## Mechanical (MEC)

**MEC 7003. CNC Operator Training I. 0.0 Hours.** Class-440.0.  
Clinical-0.0. Lab-0.0. Work-0.0

**MEC 7111. Machine Shop Practices. 0.0 Hours.** Class-330.0.  
Clinical-0.0. Lab-0.0. Work-0.0

This course will include the following: introduction to machine tools (drill press, lathe, milling machine, shaper, grinders, etc.), care and use of basic hand tool and measuring instruments, elementary layout and processes on lathe, drill press, and off-hand grinding of tools. Safety glasses are required.

**MEC 7200. CNC Programming in the Workplace. 0.0 Hours.**  
Class-330.0. Clinical-0.0. Lab-0.0. Work-0.0

APICS-The Educational Society for Resource Management is a not-for-profit international educational organization known for its education and professional certification programs. Though Corporate and Continuing Education, CPCC offers CPIM preparation courses to prepare individuals for certification and to help organizations improve workplace performance.

**MEC 7210. Introduction to CNC Control. 0.0 Hours.** Class-330.0.  
Clinical-0.0. Lab-0.0. Work-0.0

This course provides a basic introduction to the operation of specific CNC equipment within the workplace. Included is an introduction to writing and loading computer code into a particular piece of equipment to produce the machining results desired.

## Performing Arts (AAC, MEM)

**AAC 8000. Broadway Dance - TAP. 0.0 Hours.** Class-440.0. Clinical-0.0.  
Lab-0.0. Work-0.0

Learn the fundamentals of elementary tap dance with emphasis on sounds, rhythms, terminology and body placement. Successful students will show significant progress in elementary tap skills.

**AAC 8002. Audio Engineering 1. 0.0 Hours.** Class-440.0. Clinical-0.0.  
Lab-0.0. Work-0.0

This course introduces the recording studio, the music industry and the fundamentals of analog and digital audio. Topics focus on the foundations of modern recording including the study of sound and hearing; recording consoles; signal flow; principles of signal processing: reverberation, delay, equalization, and other effects; a study of microphones and techniques; and an introduction to recording production and techniques. Classes are lectures with in-class demonstration and hands-on training. Upon completion, students should have a fundamental understanding of recording equipment, music industry and its relationship to musician, audio engineer and producer.

**AAC 8003. Audio Engineering 2. 0.0 Hours.** Class-440.0. Clinical-0.0.  
Lab-0.0. Work-0.0

This course continues the study and application of recording techniques from Audio Engineering 1. Emphasis is on multi-track recording and mix-down, microphone placement, and patch bay function. Upon completion, students should be able to create projects demonstrating proficiency in the skills and use of the equipment.

Corequisites: Take AAC 8102. AAC 8102 may be taken concurrently with AAC 8003.

**AAC 8004. The Art of Production I. 0.0 Hours.** Class-440.0. Clinical-0.0.  
Lab-0.0. Work-0.0

This course is designed to develop film/video production assistants and specialists for broadcast production, film and video production, and entertainment technologies. Course has hands-on training for beginning and intermediate production specialists.



**AAC 8005. Audio Engineering 3 Techniques. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This course introduces digital work stations in the recording studio. Students will use Pro Tools, Cubase X, Nuendo or Wavelab to input audio into the computer and edit, mix and complete an audio CD recording. Corequisites: Take AAC 8002

**AAC 8006. So, you've always wanted to play the Harp?. 0.0 Hours.**

Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This introductory course provides the basic principles of playing folk harp.

**AAC 8007. Folk Harp Ensemble. 0.0 Hours.** Class-440.0. Clinical-0.0.

Lab-0.0. Work-0.0

Harp students will get an opportunity for learning new repertoire from traditional folk music idiom in a supportive ensemble environment.

**AAC 8008. Opera Theatre/Opera Carolina Summer Training Program. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This course trains singers in body and stage movement, acting techniques/stagecraft, vocal technique, diction, stage makeup/ costuming, career promotion and development, and performance preparation.

**AAC 8009. Glaze Workshop. 0.0 Hours.** Class-440.0. Clinical-0.0.

Lab-0.0. Work-0.0

This course will give students a working knowledge of glaze formulation, glaze materials, the aesthetics of different firing techniques, and troubleshooting.

**AAC 8010. Video Editing I (Final Cut Pro). 0.0 Hours.** Class-440.0.

Clinical-0.0. Lab-0.0. Work-0.0

Learn the basics for editing digital media using Final Cut Pro X.

**AAC 8011. Summer Ballet Intermediate. 0.0 Hours.** Class-440.0.

Clinical-0.0. Lab-0.0. Work-0.0

This course will allow the student to maintain and improve ballet technique during the summer. Emphasis is placed on developing clarity and precision in placement, rhythm and quality. Upon completion, students should be able to demonstrate progress in technical control of intermediate steps.

**AAC 8012. Video Editing II (Final Cut Pro). 0.0 Hours.** Class-440.0.

Clinical-0.0. Lab-0.0. Work-0.0

Gain intermediate working knowledge for editing digital media using Final Cut Pro X.

**AAC 8013. Summer Beginning Modern Dance. 0.0 Hours.** Class-440.0.

Clinical-0.0. Lab-0.0. Work-0.0

This course introduces elementary elements of Modern Dance technique. Emphasis is placed on floor, barre and center exercises. Upon completion, students should be able to demonstrate basic skills in elementary Modern Dance movements.

**AAC 8014. The Art of Production II. 0.0 Hours.** Class-440.0.

Clinical-0.0. Lab-0.0. Work-0.0

This course is designed to develop film/video production assistants and specialists for broadcast production, film and video production, and entertainment technologies. The Art of Production II provides "hands on" training for intermediate and advanced production specialists.

**AAC 8015. CPCC Community Jazz Ensemble. 0.0 Hours.** Class-440.0.

Clinical-0.0. Lab-0.0. Work-0.0

This course introduces students to the jazz repertoire through large jazz ensemble performance.

**AAC 8016. Script Writing. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0.

Work-0.0

This course introduces students to script writing through lecture and hands-on experience.

**AAC 8017. Exploration Into the Creative Process of Making Visual Art. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

Students will live on a farm for a week in Virginia in order to concentrate on different avenues of thought and production of making visual art. The participants will explore writing each morning. Afternoons will consist of visual art instruction. Evenings will include poetry readings and discussions.

**AAC 8018. Piano for Beginners. 0.0 Hours.** Class-440.0. Clinical-0.0.

Lab-0.0. Work-0.0

This adult education class is one geared toward learning to play the piano for the fun of it. There are lots of adults out there who say, "I wish I would have learned to play the piano when I was a kid." It's truly never too late to learn a new talent and it is fun too.

**AAC 8019. Piano for Beginners Level 2. 0.0 Hours.** Class-440.0.

Clinical-0.0. Lab-0.0. Work-0.0

If you have taken AAC-8018, Piano for Beginners, and you're ready to learn more, this class is for you! This class will help to further develop piano playing skills.

Corequisites: Take AAC 8018 minimum grade S

**AAC 8020. VOX Choral Ensemble. 0.0 Hours.** Class-440.0. Clinical-0.0.

Lab-0.0. Work-0.0

Vox is 16-member, SATB (4 per part), fully professional chorus, sponsored by the Firebird Arts Alliance and Central Piedmont Community College.

**AAC 8021. Finale Music Notation. 0.0 Hours.** Class-440.0. Clinical-0.0.

Lab-0.0. Work-0.0

This course is an introduction to using Finale composing & notation software.

**AAC 8022. Beginners' Old Time Jam Class. 0.0 Hours.** Class-440.0.

Clinical-0.0. Lab-0.0. Work-0.0

If you know the basics of playing an instrument (you can play a basic melody or you can make basic chords), but are intimidated by the thought of actually joining a jam, then this class is for you!

**AAC 8023. Film Editing I. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0.

Work-0.0

This class will examine the use of digital editing as a tool for adding aesthetic and emotional elements to filmed narrative. The students will be led through a series of demonstrations and exercises with a common purpose: To help the student learn and understand editing techniques that serve to enrich the storytelling process. Upon completion of this course a student should: Understand the connection between creative editing and inspired narrative; Have a basic understanding of advanced editing tools offered in Final Cut Pro Studio.

**AAC 8024. Folk Harp Ensemble II. 0.0 Hours.** Class-440.0. Clinical-0.0.

Lab-0.0. Work-0.0

This class is designed to focus primarily on the technical aspects of playing the harp.

**AAC 8025. Ballet Dance Performance. 0.0 Hours.** Class-440.0.

Clinical-0.0. Lab-0.0. Work-0.0

Learn to maintain and improve your ballet technique for a performance. Emphasis is on clarity and precision in rehearsals and performance. Upon completion, students should be able to perform before an audience.

**AAC 8026. Audio Engineering Independent Project. 0.0 Hours.**

Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This course introduces students to working independently in the recording studio. Using digital and audio recording techniques acquired in previous levels, the student will apply recording/production postproduction techniques, then edit, mix and complete an audio CD recording.

**AAC 8027. Exploring Painting Media. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

Beginner and advanced painters will focus on developing a number of two-dimensional media. This is designed to prepare and enhance "Exploring Visual Art" summer class.

**AAC 8028. Ceramics. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This class is for practicing or beginning studio ceramicists. If you are a practicing artist, bring your ideas to class. Just starting out? Needed supplies will be discussed in the first class. You will receive assistance, expert advice, demos and critiques as you work at your own pace; all under the guidance of our talented instructor and working artist. Beginners and all skill levels are welcome in this class!

**AAC 8030. Try on a Harp!. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

Come and try your hand at learning to play the most ancient of instruments. Small harps will be provided. Bring your enthusiasm and curiosity.

**AAC 8031. Basic Jewelry Making/Metalsmithing Techniques. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

Interested in learning the basic jewelry and metalsmithing techniques to create your own jewelry? Don't miss this opportunity to work at the best fully equipped jewelry studio CPCC and the Queen City have to offer. Join us for this 8-week introductory class that will go beyond your expectations. Students will focus on learning basic jewelry and metalsmithing techniques in a fun and creative way. In this basic jewelry class, students will learn sawing, piercing, forming, soldering, stone setting, and patination, as well as ring making and chain making. At the end of this course each student will have a basic understanding on jewelry making and studio equipment.

**AAC 8032. Intermediate Jewelry and Metalsmithing. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

Interested in continuing learning about jewelry and metalsmithing techniques to create your own jewelry? Join us for this amazing 8 week class intermediate class that will make you fall in love with jewelry making. In this class students will focus on learning advanced jewelry and metalsmithing techniques in a fun and creative way. After taking this course, students will have a thorough understanding of advanced jewelry making techniques and studio equipment.

**AAC 8034. Modern Rehearsal. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This course will allow the student to maintain and improve modern dance technique for a performance. Emphasis is placed on developing clarity and precision in rehearsals and performance. Upon completion, students should be able to perform before an audience.

**AAC 8036. Modern Dance Intermediate. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This course introduces intermediate elements of Modern Dance technique. Emphasis is placed on floor, barre and center exercises. Upon completion, students should be able to demonstrate basic skills in intermediate Modern Dance movements.

**AAC 8037. Summer Theatre Technical Production (Costumes). 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

A practical introduction to technical theatre, this course provides students with firsthand experience and training in the various technical elements of creating theatrical costumes. These may include pattern making & cutting, hand & machine sewing, etc. The CPCC Summer Theatre program is a fast-paced professional theatre environment that allows students to gain experience working with a variety of theatre styles; including comedy, mystery, drama, children's theatre, and musical theatre.

**AAC 8038. Summer Theatre Technical Production (Scenery). 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

A practical introduction to technical theatre, this course provides students with firsthand experience and training in the various technical elements of creating theatrical scenery. These may include carpentry, scenic painting, and properties. The CPCC Summer Theatre program is a fast-paced professional theatre environment that allows students to gain experience working with a variety of theatre styles; including comedy, mystery, drama, children's theatre, and musical theatre.

**AAC 8039. Opera Performance. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This course provides an applied laboratory study of the processes involved in the production of an opera. Topics include fundamental practices, principles, and techniques associated with producing operas of various musical periods. Emphasis will be placed on vocal technique, diction, stage craft and performance skills. Upon completion, students should be able to participate in an assigned position in a college opera production.

**AAC 8040. Pendants Galore!. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

Learn basic jewelry and metalsmithing techniques while creating 3 handmade pendants. Explore sawing, filing, turtle setting, bezel setting, and chain making and learn the history of jewelry and metalsmithing.

**AAC 8041. Rings Extravaganza!. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

Learn basic jewelry and metalsmithing techniques while creating 3 handmade rings. Discover ring-making, soldering, stone setting and stamping as well as a quick introduction to the history of jewelry and metalsmithing.

**AAC 8042. Torch Enameled Jewelry. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

Discover the basics of torch enameling. Enameling is a technique where glass is fused to metal under high heat using a jewelry acetylene torch. Explore torch enamel techniques as well as how to integrate color into your jewelry. This class is for beginner and intermediate students who want to learn or improve their jewelry and metalsmithing skills.

**AAC 8043. Stone Setting Jewelry. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

Discover the basics of stone setting and explore techniques such as turtle setting, bezel setting and prong setting, as well as the platforms on which these techniques can be used in jewelry making. This class is for beginner and intermediate students who want to learn or improved their jewelry and metalsmithing skills.

**AAC 8045. From the Studio to the Market Place. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

From the Studio to the Market Place provides students with a solid insight into the business of art. This course focuses on the fundamentals of transitioning your artistic talent into a career and understanding the commercial infrastructures of organizations that promote and sell works of art.

**AAC 8046. Dance Production. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This course will cover creation, rehearsal and performance before a live audience of a new work by a faculty member. Emphasis is placed on movement, memory skills, role development, accepted professional behavior and the ability to project the choreographer's intent.

**AAC 8050. Urban and Street Photography. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

With our cameras we'll explore Charlotte's urban neighborhoods and photograph whatever catches our eye: people, street scenes, architectural details. Participants are encouraged to seek and shoot according to their own interests. After two hours of photographing, we'll download our images, and discuss our work with emphasis on composition, point of view, and why a certain subject was selected. Students at all experience levels welcome.

**AAC 8060. Charlotte New Music Festival Max Workshop. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This 2-week course is for programmers, developers, musicians, artists, composers, interface designers, installation designers, mathematicians, and people from various other backgrounds that want to be able to program in Max proficiently. Beginner-Advanced, no music experience necessary.

**AAC 8061. Charlotte New Music Festival Composers Workshop. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

The Composers Workshop at the Charlotte New Music Festival (CNMF) is a unique two-week event that allows a select group of about thirty student and emerging composers to work closely with world-class performers and distinguished faculty in the creation of new works for performance at CNMF. Participants will hone their craft, build their professional networks, attend several concert of exciting new music, receive valuable and pragmatic career advice from musicians with a wide range of experiences, and much more. Interested composers may also choose to participate in the Dance Co-Lab.

**AAC 8062. Charlotte New Music Festival Dance CoLab. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This course is a 2-week choreography and dance intensive - technique and choreography classes, workshop panels, music and dance concerts, and performance opportunities for local to international dancers and choreographers. Under the guidance of professionals in the field, choreographers and dancers will work together while collaborating with music composers. Their collaborations will be premiered in concert as a series of original, seamless music and dance pieces.

**AAC 8070. Adult Ballet. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This course emphasizes the utilization of ballet technique specifically for adult students, of mixed levels.

**AAC 8080. Art Health Studio. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This studio course is designed to encourage and/or support individuals who have concerns which limit their ability to express their creativity through the visual arts. What is offered here is not intended or represented to be art therapy, though some may experience therapeutic outcomes. Approval from the department is required to register.

**AAC 8087. New Orleans Brass Band Workshop. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This workshop is for students interested in gaining experience and instruction specifically related to playing in a New Orleans brass band tradition. Students will learn standard brass band repertoire and develop basic improvisation skills. All instruments are welcome including woodwinds, brass, strings, and percussion.

**AAC 8088. Big Band Jazz. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This course will teach students how to play Big Band Jazz in a large ensemble setting. Repertoire will include Big Band music from the 1940's thru the 1960's. The ensemble will consist of skill levels ranging from intermediate to advanced. Students should have previous experience with reading music. If you play the trumpet, trombone, saxophone, guitar, bass, piano, or drums and would like to play in an ensemble setting, come join the Big Band!

**AAC 8089. Queen City Bass Workshop. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

The Queen City Bass Workshop week offers Masterclasses with notable bass instructors. Emphasis is placed on the Rabbath Technique, in addition to expanding upright and electric bass pedagogy. Come expand your solo bass repertoire, as well as your ensemble repertoire!.

**AAC 8090. Social Circus. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

Take part in a social circus initiative rooted in the "underground" dance/acrobatic/physical theatre scenes present in the vast array of cultures. Through physical language--dance and movement--students will explore stories of their struggles, histories, traditions, transformations, and iconography as they examine the idea of what it is to be a citizen of the 'new' south.

**AAC 8102. Audio Engineering 1B. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This class provides the student with the information necessary to succeed in the audio engineering field. Building on the fundamentals learned in Audio Engineering 1, the Audio Engineering 1B class provides a more in-depth study of the topics from the Audio Engineering 1 class and bridges the gap between the Audio Engineering 1 and Audio Engineering 2. Corequisites: Take AAC 8002. May be taken concurrently with AAC 8003.

**AAC 8733. CPCC Vocal Ensemble. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

A vocal ensemble geared to training their voices for a cappella singing in such genres as; jazz, gospel, classical and folk music.

**MEM 8750. Tablesaw and Radial Arm Saw Basics. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

Familiarization of machine operation and safety considerations for using power tools. Discussion and recognition of joinery options available.

**MEM 8751. Stock Preparation: Gluing Clamping & Joinery. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This class begins with an introduction to the varieties of wood available for purchase and the characteristics of rough cut lumber. Instruction will be given on the dimensioning process to include demonstrations of the joiner and planer and a brief overview of how the table saw and miter saw relate to the dimensioning of rough cut lumber. A biscuit cutting demo will follow with tips on clamping and joining dimensional lumber.

**MEM 8752. Sanding and Finishing. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

A Discussion of Sanding and Sandpaper, Hand Plane/Scrapers to prepare surfaces for finishing. Also covered will be different types of finishes and applications. The instructor will show examples of good and bad finishes.

**MEM 8755. Dovetail by Hand. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

A discussion of dovetailing techniques used for dovetails.

**MEM 8770. Beginning Woodworking Combination. 0.0 Hours.**

Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This class includes Radial Arm and Table Saw basics, stock preparation, gluing and clamping, sanding and finishing, and five class meetings to build a project.

**MEM 8772. Intermediate Woodworking Combination. 0.0 Hours.**

Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

Build a project of your choice which includes a drawer(s) using your newly developed skills. Includes extensive rowter application.

**MEM 8773. One Special Christmas. 0.0 Hours.** Class-440.0. Clinical-0.0.

Lab-0.0. Work-0.0

A Community Service class in which volunteers build woodworking projects which are auctioned off. The proceeds are used to purchase toys for the underprivileged.

**MEM 8799. Log Cabin Home Construction. 0.0 Hours.** Class-440.0.

Clinical-0.0. Lab-0.0. Work-0.0

The students will build a replica of an 18th century log structure using traditional tools and materials.

## Plumbing (PLU)

**PLU 7000. Commercial/Residential Plumbing Level I, Part I. 0.0 Hours.**

Class-175.0. Clinical-0.0. Lab-0.0. Work-0.0

This course is designed to provide training in the Plumbing Level 1 competencies including the Math for Plumbers; Introduction to Plumbing Blueprint Reading; Reading Residential Plumbing Drawings; Copper and Plastic Piping Practices; Soldering and Brazing; Cutting and Threading Carbon Steel Pipe; Joining Cast-iron Pipe and Fittings; Making Flared and Compression Joints with Copper Tube; Installing Traps and Interceptors; Fitting and Cleanout Requirement for DWV Piping; Installing Natural Gas Piping Systems; Installing Fuel Oil Piping Systems.

**PLU 7001. Commercial/Residential Plumbing Level I, Part II. 0.0**

**Hours.** Class-175.0. Clinical-0.0. Lab-0.0. Work-0.0

**PLU 7006. Plumbing 1-2-3. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0.

Work-0.0

Put the yellow pages away; let us teach you how to tackle your own plumbing projects. This class will lead you through the basic plumbing methods, including the tools and materials used to install plumbing pipe work and plumbing fixtures. Primary emphasis will be placed on plumbing systems for residential homes.

**PLU 7010. Residential/Commercial Plumbing Core. 0.0 Hours.**

Class-653.0. Clinical-0.0. Lab-0.0. Work-0.0

This preparatory apprenticeship training is designed to provide Plumbing Level I - Level IV training required for journeyman plumbers. The program consists of four years of training with a minimum of 144 hours of instruction per year. Prerequisite: Courses must be taken in sequence.

This course was developed by contractors and the NC Department of Labor. Students in this program are intended to be indentured apprentices with the NC Department of Labor.

**PLU 7015. Backflow Assembly Tester Certification. 0.0 Hours.**

Class-42.0. Clinical-0.0. Lab-0.0. Work-0.0

This class is designed to help students develop entry level skills and working knowledge of the causes and principles of backflow and backflow prevention. Student will be able to recognize the proper backflow prevention assembly application, installation and operation. Students will practice accurate record keeping and demonstrate a working knowledge of the backflow program responsibilities. Student will learn to apply hydraulic principles and laws and recite applicable and relevant plumbing code requirements.

**PLU 7016. Backflow Prevention Assembly and Tester Recertification.**

**0.0 Hours.** Class-14.0. Clinical-0.0. Lab-0.0. Work-0.0

This course will focus on reviewing the basic skills and knowledge for a backflow assembly field tester. The student must have completed a CMUD (Charlotte Mecklenburg Utility Department) approved course in cross connection control and require recertification of original certificate.

**PLU 7017. Residential/Commercial Plumbing Level I, Part I. 0.0 Hours.**

Class-653.0. Clinical-0.0. Lab-0.0. Work-0.0

This preparatory apprenticeship training is designed to provide Plumbing Level 1 - Level 4 training required for journeymen plumbers. The program consists of four years of training with a minimum of 144 hours of instruction per year.

Prerequisites: Take PLU 7010 with a minimum grade of S

**PLU 7018. Residential/Commercial Plumbing Level I, Part II. 0.0**

**Hours.** Class-653.0. Clinical-0.0. Lab-0.0. Work-0.0

This preparatory apprenticeship training is designed to provide Plumbing Level 1 - Level 4 training required for journeymen plumbers. The program consists of four years of training with a minimum of 144 hours of instruction per year. Prerequisite: Courses must be taken in sequence.

This course was developed by contractors and the NC Department of Labor. Students in this program are intended to be indentured apprentices with The NC Department of Labor.

Prerequisites: Take PLU 7010 PLU 7017 with a minimum grade of S

**PLU 7020. Residential/Commercial Plumbing Level II, Part I. 0.0**

**Hours.** Class-653.0. Clinical-0.0. Lab-0.0. Work-0.0

This preparatory apprenticeship training is designed to provide Plumbing Level II required for journeyman plumbers. The program consists of four years of training with a minimum of 144 hours of instruction per year.

Prerequisite: Students must complete the plumbing apprentice core skills course and courses must be taken in sequence. This course was developed by contractors and the NC Department of Labor. Students in this program are intended to be indentured apprentices with the NC Department of Labor.

Prerequisites: Take PLU 7010 PLU 7017 PLU 7018 with a minimum grade of S

**PLU 7021. Residential/Commercial Plumbing Level II, Part II. 0.0**

**Hours.** Class-653.0. Clinical-0.0. Lab-0.0. Work-0.0

This preparatory apprenticeship training is designed to provide Plumbing Level II required for journeyman plumbers. The program consists of four years of training with a minimum of 144 hours of instruction per year.

Prerequisite: Students must complete the plumbing apprentice core skills course and courses must be taken in sequence. This course was developed by contractors and the NC Department of Labor. Students in this program are intended to be indentured apprentices with the NC Department of Labor.

Prerequisites: Take PLU 7010 PLU 7017 PLU 7018 PLU 7020 with a minimum grade of S

**PLU 7030. Residential/Commercial Plumbing Level III, Part I. 0.0**

**Hours.** Class-653.0. Clinical-0.0. Lab-0.0. Work-0.0

This preparatory apprenticeship training is designed to provide Plumbing Level III required for journeyman plumbers. The program consists of four years of training with a minimum of 144 hours of instruction per year.

Pre-requisite: Students must complete the plumbing apprentice core skills course and courses must be taken in sequence. This course was developed by contractors and the NC Department of Labor. Students in this program are intended to be indentured apprentices with the NC Department of Labor.

Prerequisites: Take PLU 7010 PLU 7017 PLU 7018 PLU 7020 PLU 7021 with a minimum grade of S



**PLU 7031. Commercial/Residential Plumbing Level III, Part II. 0.0**

**Hours.** Class-175.0. Clinical-0.0. Lab-0.0. Work-0.0

This preparatory apprenticeship training is designed to provide Plumbing Level III required for journeyman plumbers. The program consists of four years of training with a minimum of 144 hours of instruction per year.

Prerequisite: PLU 7010, Residential/Commercial Plumbing Level I, Pt 1; PLU 7017, Residential/Commercial Plumbing Level I, Pt 2; PLU7020 Residential/Commercial Plumbing Level II, Pt 1; PLU 7021 Residential/Commercial Plumbing, Level II, Pt 2. PLU 7030 Residential/Commercial Plumbing, Level III, Pt 1. This course was developed by contractors and the NC Department of Labor. Students in this program are intended to be indentured apprentices with the NC Department of Labor.

Prerequisites: Take PLU 7010 PLU 7017 PLU 7018 PLU 7020 PLU 7021 PLU 7030 with a minimum grade of S

**PLU 7040. Commercial/Residential Plumbing Level IV, Part I. 0.0**

**Hours.** Class-175.0. Clinical-0.0. Lab-0.0. Work-0.0

This preparatory apprenticeship training is designed to provide Plumbing Level IV required for journeyman plumbers. The program consists of four years of training with a minimum of 144 hours of instruction per year.

Prerequisite: PLU 7010, Residential/Commercial Plumbing Level I, Pt 1; PLU 7017, Residential/Commercial Plumbing Level I, Pt 2; PLU7020 Residential/Commercial Plumbing Level II, Pt 1; PLU 7021 Residential/Commercial Plumbing, Level II, Pt 2; PLU 7030 Residential/Commercial Plumbing, Level III, Pt 1; PLU 7031 Residential/Commercial Plumbing, Level III, Pt 2. This course was developed by contractors and the NC Department of Labor. Students in this program are intended to be indentured apprentices with the NC Department of Labor.

Prerequisites: Take PLU 7010 PLU 7017 PLU 7018 PLU 7020 PLU 7021 PLU 7030 PLU 7031 with a minimum grade of S

**PLU 7041. Commercial/Residential Plumbing Level IV, Part II. 0.0**

**Hours.** Class-175.0. Clinical-0.0. Lab-0.0. Work-0.0

This preparatory apprenticeship training is designed to provide Plumbing Level IV required for journeyman plumbers. The program consists of four years of training with a minimum of 144 hours of instruction per year. Prerequisite: PLU 7010 Core; PLU 7017 Residential/Commercial Plumbing Level I, Pt 1; PLU 7018 Residential/Commercial Plumbing Level I, Pt 2; PLU7020 Residential/Commercial Plumbing Level II, Pt 1; PLU 7021 Residential/Commercial Plumbing, Level II, Pt 2; PLU 7030 Residential/Commercial Plumbing, Level III, Pt 1; PLU 7031 Residential/Commercial Plumbing, Level III, Pt 2; PLU 7040, Residential/Commercial Plumbing, Level IV, Pt 1. This course was developed by contractors and the NC Department of Labor. Students in this program are intended to be indentured apprentices with the NC Department of Labor.

Prerequisites: Take PLU 7010 PLU 7017 PLU 7018 PLU 7020 PLU 7021 PLU 7030 PLU 7031 PLU 7040 with a minimum grade of S

**PLU 7101. Introduction to Plumbing. 0.0 Hours.** Class-96.0.

Clinical-0.0. Lab-0.0. Work-0.0

This is an introduction course to the plumbing trade with an emphasis on residential plumbing materials and installation methods.

**PLU 7200. Blueprint Reading for Plumbing. 0.0 Hours.** Class-72.0.

Clinical-0.0. Lab-0.0. Work-0.0

Introduces the types of plumbing drawings on the job. Discusses how to interpret & apply them when laying out & installing plumbing systems. Discusses symbols used in plumbing & mechanical drawings & reviews isometric, oblique, orthographic and schematic drawings. Trainees render plumbing drawings and recognize how code requirements apply to plumbing drawings. Teaches trainees to interpret and use civil, architectural, structural, mechanical, plumbing and electrical drawings when installing plumbing systems, and create and use isometric drawings, material takeoffs and approved submittable data.

**PLU 7600. Plumbing 1-2-3. 0.0 Hours.** Class-330.0. Clinical-0.0. Lab-0.0. Work-0.0

Put the yellow pages away; let us teach you how to tackle your own plumbing projects. This class will lead you through the basic plumbing methods, including the tools and materials used to install plumbing pipe work and plumbing fixtures. Primary emphasis will be placed on plumbing systems for residential homes.

**PLU 8000. Residential/Commercial Plumbing CORE. 0.0 Hours.**

Class-653.0. Clinical-0.0. Lab-0.0. Work-0.0

This course uses the NCCER training format and provides certificates of competency in core plumbing knowledge. The topics covered include safety construction math, blueprint reading, hand tool and power tool use. This portion covers CORE only.

**PLU 8001. Residential/Commercial Plumbing Level I. 0.0 Hours.**

Class-653.0. Clinical-0.0. Lab-0.0. Work-0.0

This course uses the NCCER training format and provides certificates of competency in level 1 plumbing knowledge. The topics covered include fittings, drains and distribution systems.

Corequisites: Take PLU 8000 minimum grade S

**PLU 8002. Residential/Commercial Plumbing Level 2. 0.0 Hours.**

Class-653.0. Clinical-0.0. Lab-0.0. Work-0.0

This course uses the NCCER training format and provides certificates of competency in plumbing level 2. The topics covered includes advanced math and reading drawings, installation of piping, fixtures, and valves, and basic electricity.

Corequisites: Take PLU 8000 PLU 8001 minimum grade S

**PLU 8003. Residential/Commercial Plumbing Level 3. 0.0 Hours.**

Class-653.0. Clinical-0.0. Lab-0.0. Work-0.0

This course uses the NCCER training format and provides certificates of competency in basic plumbing knowledge. The topics covered include drawings, distribution systems, drains, waste, vents, insulation, and piping. Corequisites: take cix 7017 plu 8000 plu 8001 plu 8002 minimum grade s

**PLU 8004. Residential/Commercial Plumbing Level 4. 0.0 Hours.**

Class-653.0. Clinical-0.0. Lab-0.0. Work-0.0

This course uses the NCCER training format and provides certificates of competency in basic plumbing knowledge. Topics cover: Business Principles for Plumbers, Introductory Skills for the Crew Leader, Water Pressure Booster and Recirculation Systems, Indirect and Special Waste, Hydronic and Solar Heating Systems, Codes, Servicing Piping Systems - Fixtures and Appliances, Private Water Supply Well Systems, Private Waste Disposal Systems, Swimming Pools and Hot Tubs, and Plumbing for Mobile Homes and Travel Trailers.

Corequisites: take cix 7017 plu 8001 plu 8002 plu 8003 minimum grade s

**PLU 8006. Residential/Commercial Plumbing Level 2C. 0.0 Hours.**

Class-653.0. Clinical-0.0. Lab-0.0. Work-0.0

This course uses the NCCER training format and provides certificates of competency in basic plumbing knowledge. The topics covered include drawings, distribution systems, drains, waste, vents, insulation, and piping. Corequisites: Take PLU 8001 PLU 8002 minimum grade S

## Process Control Instrumentation (PCI)

**PCI 7170. LabView Fundamentals I. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This course is a survey of data acquisition and control applications in an industrial setting. Topics include remote I/O systems, PC-based data acquisition, real-time monitoring and other related topics. Upon completion, students should be able to demonstrate an understanding of data acquisition circuits. This course is a certified National Instruments Academy course and will cover the material to help prepare for the National Instruments Certified LabView Associate Developer certification.

**PCI 7173. Basic Programmable Systems. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

The course is a focuses on programmable systems used in industry. Topics include PLC systems, and PAC systems used in control systems implementation. Upon completion, students should be able to demonstrate an understanding of the programming, troubleshooting, configuration, maintenance and planning involved in control systems. To introduce students to the similarities and differences of PLCs and PACs; and to the design of basic PLC and PAC programs using discrete and analog I/O, timers, counters, math functions, and operator interfaces; and to the sharing of data between PLC and PAC systems using appropriate industrial networks and human machine interface (HMI) software.

## Reading (RED)

**RED 7090. Improved College Reading - Abridged. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

Fast Track RED 7090 is a fast-paced, intensive abridgement of Improved College Reading in a standard instructor-student format. The prerequisite for the course is successful completion of RED 080 or the appropriate placement-test score. After successful completion of the course, which includes a retaking of the Reading-Comprehension placement test, a student may advance to ENG 111, provided that the additional prerequisite of ENG 090 with a grade of "C" or higher or the appropriate Sentence-Skills placement-test score has been met.

Prerequisites: Complete one of the following options:

- Take RED 080
- Take ENG 085 ENG 085A

## Simulation & Game Development (SGD)

**SGD 7000. Video Game Code Camp. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

Students will learn to code following a Code.org curriculum developed by engineers at Google, Facebook and Twitter. Students will gain a practical understanding of basic coding concepts by completing small projects in their favorite environments, such as Star Wars, Minecraft and Frozen. They will learn how to sequence instructions, write procedures and utilize loops through self-guided activities, and will create their own project by the end of the camp.

**SGD 7001. Disney Infinity Game Design Code Camp. 0.0 Hours.**

Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This camp provides many opportunities for computer science education, from basic concepts at an elementary school level to Agile Development experience. Combining a cast of characters from Disney, Pixar, Marvel and Star Wars, Disney Infinity cultivates an interest in STEM (Science, Technology, Engineering, Math) for both boys and girls, by incorporating virtual artistry through storytelling to spark the imagination. Students will use logic toys in a three-dimensional virtual programming environment and Toy Boxes to learn to code their own Toy Boxes, games and stories, and will share them online to entertain or challenge their friends.

**SGD 7002. Minecraft Camp. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

Minecraft, a "sandbox" game by Mojang based on building blocks, has taken the world by storm. It is one of the top-selling PC games of all time, with more than 100 million registered users worldwide. In recent years, the game has been used as an educational tool, and a vehicle for engaging students in STEM (Science, Technology, Engineering, Math) fields, including computer science, engineering and game design and development. In this camp, students will discover the underlying mechanics of the game in a collaborative environment. Both novice and advanced students will create themes, storylines, dialog, objectives and more. Advanced students will delve deeper into game design and development by exploring level design and logical problem solving.

**SGD 7003. Mobile Game Development Camp. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

Students will begin by learning coding concepts, development and publishing mobile apps using Android Studio, AppInventor and Unity3D. Students will then learn C# concepts to make a simple mobile game using Unity3D. There are currently over 2.1 million apps on Android's app store. This is up from a little over ten thousand in 2008. This number will only continue to grow in the coming years.

**SGD 7004. Video Game 3D Modeling Camp. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

In this camp, student will be using Autodesk Maya to create simple environmental models commonly seen in games. Topics will include 3D modeling techniques related to edgeflow, the recognition of basic shapes and form, Maya tools, and rendering.

**SGD 7005. Virtual Reality Camp. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This camp will introduce students to the new frontier of video game development--virtual reality! Students will create their own virtual world, and discover how fun and engaging their worlds can be when explored using the Google Cardboard, Oculus Rift and Samsung Gear VR. Students will create their own worlds using Unity game engine, and learn proper techniques of the game development pipeline, rudimentary programming, and how to create their own custom environments.

**SGD 7006. Motion Capture Camp. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

In this camp students will be using Xsens, a camera-less, wireless motion capture technology, to capture motion for animations in film, simulations, and games. Xsens is the leading innovator in 3D motion tracking technology and products. Its sensor fusion technologies enable a seamless interaction between the physical and the digital world in consumer devices and professional applications such as 3D character animation, motion analysis, and industrial control & stabilization. The student will have the opportunity to act out actions and see it translated live to a character on the screen in Unity3D.

**SGD 7111. Introduction to Simulation & Game Development. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This course provides an introductory overview of the simulation & game development process. Topics include historical context, content creation strategies and future trends in the industry. Additionally, the course explores how simulations and games are produced, tested and released.

**SGD 7113. SGD Programming. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This course introduces the fundamentals of programming languages and tools employed in simulation and game development. Emphasis is placed on programming concepts used to create simulations and games. Upon completion, students should be able to program simple games and/or simulations.

**SGD 7171. Flash SG Programming. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This course introduces the Flash programming environment for use in simulation and game development. Topics include timeline effects, extensibility layers, alias text, globalization tools, ActionScript and lingo programming. Upon completion, students should be able to create a simple simulation or game using Flash.

## Spanish (SPA)

**SPA 7000. Spanish for Law Enforcement. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

In this course, you'll focus specifically on Spanish for law enforcement personnel, skipping the "touristy" phrases you don't need to know. Whether you're new to the Spanish language or just want a refresher, this course will teach you the basic Spanish phrases you need for everything from making casual conversation to handling life-or-death situations. You'll start with simple vocabulary for everyday topics including colors, numbers, conversational phrases, family names and words for asking questions. Next, you'll learn Spanish terminology you can use during arrests, traffic stops, medical emergencies and many other common law enforcement situations.

**SPA 7001. Spanish for Medical Professionals. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

Are you struggling to communicate with your Spanish-speaking patients? If so, here's the perfect solution. Whether you're new to the Spanish language or just want a refresher, this fun and simple course will give you the basic tools you need to bridge the communication gap.

**SPA 7002. Spanish for Medical Professionals II. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

Do you feel like you have a pretty good sense of intro Spanish, but are ready to take it to the next level? This course picks up where the first course, Spanish for Medical Professionals, left off. And if you didn't take the first course, no problem! This course is also for healthcare providers who already have a pretty good sense of Spanish, but just need more medical vocabulary to sharpen their skills.

**SPA 7500. Speed Spanish. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This course is designed for anyone who wants to learn Spanish pronto. You'll learn six easy recipes for gluing Spanish words together to form sentences. In no time at all, you'll be able to go into any Spanish speaking situation and converse in Spanish.

**SPA 7501. Speed Spanish II. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

See an immediate improvement in your Spanish fluency by enrolling in Speed Spanish II. You'll see words, hear them pronounced properly, and be granted plenty of opportunities to practice your pronunciation. Then, you'll learn several clever recipes that you can use to glue the words together into sentences.

**SPA 7502. Speed Spanish III. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

Master your ability to speak, understand, and read Spanish by taking the final installment in our unique three-part Speed Spanish learning series. In this advanced-level course, you'll learn the final six recipes that will serve as templates to help you create any Spanish sentence you want.

**SPA 8000. Spanish for Social Services. 0.0 Hours.** Class-66.0. Clinical-0.0. Lab-0.0. Work-0.0

**SPA 8001. Spanish for School Administrators, Teachers and Support Staff. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

**SPA 8002. Command Spanish for Health Care Professionals I. 0.0 Hours.** Class-66.0. Clinical-0.0. Lab-0.0. Work-0.0

This course will prepare non-Spanish speaking health care professionals to provide medical care and attention to Spanish-speaking patients in medical offices and hospitals. This course will also provide transcultural training. Emphasis will be placed on enhancing quality of patient care. No prior knowledge of Spanish is necessary. Materials not included. Students must purchase a Command Spanish manual. This course is offered in partnership with Carolinas HealthCare System. For information, call Edith Valladares at 704/330-6064.

**SPA 8003. Workplace Pathways Spanish. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This course offers applied Spanish for the workplace to facilitate basic communication with people whose native language is Spanish. Emphasis is placed on oral communication and career specific vocabulary. Upon completion, participants should be able to communicate at a functional level with native speakers and demonstrate cultural sensitivity.

**SPA 8070. Acting and Theater in Spanish. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This course will prepare students to explore, learn, and improve the main areas of the actor's repertoire: Posture movement, voice, performing text, character, improvisations and concentration.

## Turfgrass Management (TRF)

**TRF 7000. Turf Maintenance Practices. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This course covers the following turfgrass information and practices: 1. Turfgrass species and culture, 2. Turf pests and their control, 3. Pesticide.

## Web Technologies (WEB)

**WEB 7216. Beginning ASP.NET 4.5. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This is an introductory class that provides a firm foundation for developers who are new to ASP.NET and delivers key insights for those not yet familiar with new updates. This class is a guide to create a fully functional, database-driven website, from creation of the most basic site structure all the way down to the successful deployment of the website to a production environment.

**WEB 7252. Front End Jr Developer Certification. 0.0 Hours.**

Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

The Front End Web Developer is responsible for creating and implementing Web based user interfaces. It works closely with Web designers, Back End Developers and database administrators. It is the bridge between design and development and contributes to planning and defining the web application. Some of the key subjects in this certificate are: HTML, CSS, JavaScript and jQuery.

**WEB 7254. Microsoft Basic Web App Developer Certification. 0.0**

Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This certification serves as preparation for the Microsoft Technology Associate Certification. It includes 3 fundamental classes that together lay the foundations to understand how the architecture works, and to get started developing Web Applications in Microsoft technologies.

**WEB 7256. Programming in HTML5/CSS3/JS Certificate. 0.0 Hours.**

Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

Whether you are leveraging your existing web programming skills in JavaScript or starting from scratch on a new website, the Programming HTML5/CSS3/JS Certificate track is for you. This certificate helps prepare the for the Microsoft Certified Professional, by completing training in the core solutions developer course #70-480.

## Welding (WLD)

**WLD 7100. Blueprint Reading for Welders. 0.0 Hours. Class-72.0.**

Clinical-0.0. Lab-0.0. Work-0.0

**WLD 7200. Basic Welders II. 0.0 Hours. Class-440.0. Clinical-0.0.**

Lab-0.0. Work-0.0

## Registering for Classes

### Career & College Promise Dual Enrollment Courses during High School

Career & College Promise (CCP) **allows high school juniors and seniors to earn college credit** toward a two-year or four-year degree while still in high school. Students have dual enrollment in their high school and Central Piedmont at the same time, allowing them to receive both high school and college credit for courses taken through the program. Enrollment processes are different for high school students, depending on their goals for college credit or whether they attend Charlotte-Mecklenburg Schools.

### College and Career Readiness Classes

College and Career Readiness programs offer **classes to develop academic skills**, earn a high school equivalency (GED® or HiSET®) or adult high school diploma, learn English as a second language, develop employability skills or caseworker training, and participate in various work-based learning experiences. The programs include courses for occupational skills training, for students with intellectual disabilities and for refugee education.

Enroll in these classes on the Central Piedmont College and Career Readiness website. these programs.

### College Credit Curriculum Classes

- **Students entering degree, diploma, or certificate programs** must complete the admissions/enrollment process prior to registration. (See Enrollment (p. 58) section of the catalog.)

- **Returning or new Central Piedmont students who have completed the admissions process** may register online using their student User ID and password at **MyCollege**.

## Non-Credit Corporate and Continuing Education Classes

**Students taking Corporate and Continuing Education, non-credit courses** may register without the admissions/enrollment process by calling Customer Service at 704.330.4223 or by registering online at Register Now on the Corporate and Continuing Education website. Registration for Corporate and Continuing Education courses is ongoing throughout the semester.

## Dual Enrollment during High School

Career and College Promise enrollment steps vary, depending on students' intended goals and high school locations.

The Career and College Promise website provides all **enrollments steps for students**:

- in Charlotte-Mecklenburg Schools,
- not in Charlotte-Mecklenburg Schools, or
- taking courses which are not for college credit.

## Register for College Credit Courses

Course registration services are offered at all six campuses: Cato, Central, Harper, Harris, Levine, and Merancas. Students are encouraged to register as early as possible to secure a schedule of classes that meets their needs. The college year consists of three terms. Fall and spring semesters are 16 weeks each. The summer term is eight weeks. Calendars are continually updated on the college's website along with registration dates and information for online registration. Although the summer session is shorter, summer classes carry the same course credit as those in other terms.

**Students entering degree, diploma or certificate programs** must complete the admissions/enrollment process prior to registration. (See Enrollment (p. 58) section of the catalog.)

**Returning or new Central Piedmont students who have completed the admissions process** may register online using their student User ID and password from MyCollege on the home page of the college website.

### Auditing Courses

Per the State Board of Community College definition (1DSBCCC 700.1), "Audit" means to enroll in a course section without receiving a grade, academic credit, continuing education unit or certificate of completion. Students who wish to audit a course must complete an Audit Agreement form, have it signed by the course instructor and submit the Audit Agreement to Registration Services at any Central Piedmont campus within the date ranges below:

- After the first four weeks of a 16-week term (28 calendar days including the first day of the term)



- After the first two weeks of an eight-week term (14 calendar days including the first day of the term)
- After the first week of a four-week term (seven calendar days including the first day of the term)

Registration procedures and fees for an audited class are the same as those for regular and non-credit enrollment. Certain courses, however, may be designated as inappropriate for audit. Non-credit courses may not be audited without permission from the Dean of Corporate and Continuing Education. No student is allowed to change from an audit to a credit designation or from a credit to an audit designation after the audit deadline.

The hours of an audited course are counted as part of a student's load and are subject to overload restrictions. A student may audit a course only once and all those doing so must adhere to the instructor's classroom policies. A record of the audit is entered on the student's transcript as "AU." The "AU" carries no college credit and is not converted to a letter grade. Audited courses are not covered by financial aid or veterans affairs. For more information, go to Policy 5.12 Audits, Substitutions and Waivers.

## Course Load Regulation

Students registered for at least 12 hours of credit during the fall and spring terms, and for at least 9 hours of credit during the summer term, are considered full-time students. Students are advised that overload status may occur as a result of registrations that exceed 18 course hours during the fall and spring terms and over 13 hours during the summer.

Students must identify the overload course(s) and then secure approval from the appropriate faculty advisor, program or discipline chair, division director, or instructional dean.

Students taking a full load of EFL-English as a Foreign Language (Academic ESL), which includes skill-based courses in composition, grammar, listening/speaking and reading for a total of 20 credit hours, are not required to obtain overload permission in order to take these four courses.

Students must obtain overload approval for 19 to 20 hours during fall and spring terms and for 14 to 15 hours during the summer term from a faculty advisor, program chair, division director, or appropriate instructional dean. The dean of the student's program of study area must approve overloads of 21 to 28 hours during fall or spring terms or 16 to 20 hours during summer term. Students are not allowed to register for more than 28 hours during fall or spring terms and 20 hours during summer term. For more information, go to Policy 5.07 Course Load.

## Course Substitution

Course substitutions are permitted with final approval by the Division Director of the academic area in which the substitution is sought. For students in Associate in Applied Science (A.A.S.) programs, substitution requests should originate with the advisor of the active program of study. For students in College Transfer programs [Associate in Arts (A.A.), Associate in Science (A.S.) and Associate in Fine Arts (A.F.A.)], requests should originate with the advisor of the related academic area.

Substitutions are approved and applied toward specific degrees, diplomas or certificates; therefore, it is necessary for a student to be officially enrolled in the appropriate program of study and catalog year before a substitution can be given.

Students with questions about this process may consult with their faculty advisor or contact Counseling and Advisement Services at 704.330.6433. Veterans Affairs students are approved only by the North Carolina State Approving Agency for two course substitutions per program. For more information, go to Policy 5.12 Audits, Substitutions and Waivers.

## Repeating Courses

### Curriculum Courses

In an effort to earn a higher grade and/or to enhance mastery of course content, students may repeat any curriculum course. Students may not enroll in the same course more than three times without approval of the appropriate division director, discipline chair or program chair. If students need additional advisement, the division director will refer them to Counseling and Advisement Services. A withdrawal does not count as a repeat.

When a course has been repeated, the higher grade is used to recalculate the Grade Point Average (GPA). However, all grades are recorded on the student's academic transcript. In addition, students who received a degree from Central Piedmont are advised that a final student GPA is computed at the time of graduation and that GPA may not be recalculated as courses are repeated. Furthermore, transfer students are advised that receiving institutions do not have consistent policies regarding GPA computation.

Students who receive veteran's benefits should be aware that they will not receive benefits for previously completed courses (as determined by the appropriate division). For all financial aid recipients, repeated courses are counted toward the 150 percent time frame. When students repeat courses, the repeated course is included in (a) enrollment status computations (full, 3/4, 1/2, or less than 1/2 time); (b) financial aid awards; (c) 150 percent calculations; and (d) GPA calculations.

## Senior Citizen Course Registration

Senior citizens, age 65 years or older on the first day of the course, may audit courses with the following guidelines as outlined in 1E SBCCC 1000.2:

- Tuition and registration fees are waived. Local fees associated with course sections may be charged.
- Enrollment in a course is dependent on space availability. A student who audits a course section shall not displace students enrolling or registering to receive a grade, academic credit, continuing education unit or certificate of completion in the course section.
- Registration must be processed within the schedule adjustment period during a term or session. Schedule adjustment is generally the first two days of a term or session.
- Self-supporting courses are not eligible.

### Procedures:

1. Print and complete the Audit Form.
2. Meet with the instructor before the course starts to obtain a signature permission on the audit form.
3. Submit the completed form, along with a driver's license or state identification card, to the registration office at any Central Piedmont campus on the **first day of the term or course**. Registration staff process the Audit form and return the form to the student.
4. Take the processed form to the Cashiering office for processing of the tuition waiver.

# Register for Corporate and Continuing Education Classes

## Course Search and Registration

The college's online Schedule Builder permits searches by topic to explore course descriptions, along with days, times and locations of current courses and programs. Continuing education courses may be added during the term to fit student needs.

Registration is ongoing throughout each semester with registration dates and new classes typically announced in late April, early July and early November. Most continuing education courses and programs are open enrollment and do not require prerequisites, applications or transcripts.

Contact Customer Service at 704.330.4223 for help in finding a course, with individual registration, class locations or to request a print version of the current schedule.

**To register online**, or obtain information about where or how to register in person for Corporate and Continuing Education classes, **use** Register Now on the Corporate and Continuing Education website.

# Student Handbook





# Student Handbook



The Central Piedmont online student handbook is a comprehensive site including important services, resources and policies that govern academic and campus life. This valuable student information will help students navigate the college experience.

For information, please contact [fye@cpcc.edu](mailto:fye@cpcc.edu) or call 704.330.6100.

## Attendance, Grades and Records

### Attendance

- Attendance (p. 502) in courses is critically important and can affect student grades, records, finances and refunds, and the ability to remain in a class.
- Completion of an Enrollment Verification Assignment (EVA) is required in online credit classes. Students must complete the EVA by the 10% point of the term in order to remain in the class.

### Grades

- Auditing (p. 491) a course may be possible. Students who wish to audit a course must complete an Audit Agreement form, have it signed by the course instructor and submit the Audit Agreement to Registration Services at any Central Piedmont campus by the due date.
- Course substitutions (p. 491) are permitted with final approval by the Division Director of the academic area in which the substitution is sought.
- Grade Appeals are governed by Policies and Procedures. Any student who contests a course grade must attempt first to resolve the matter with the faculty member who assigned the grade before formally appealing the course grade.
- Grade Changes (p. 502) are performed by the instructor of record in the case of a grading error, or in other appropriate circumstances.
- Grade Point Average (p. 503) (GPA) is calculated based on A, B, C, D and F grades, and affects each student's Standards of Academic Progress (SOP). Note that Financial Aid uses a slightly different method of calculating a student's Satisfactory Academic Progress standards (SAP)—see the Finances section.
- Incomplete grades (p. 503) may be assigned when a student has persisted through the course and completed at least 90 percent of

the requirements for passing the course or when the instructor has determined extenuating circumstances exist.

- Medical / Compassionate Withdrawals allow students to withdraw from all classes in extraordinary cases when serious illness or injury (medical) or another significant personal situation (compassionate) prevents a student from continuing his or her classes, and incompletes or other arrangements with the instructors are not possible.
- Repeating a credit course (p. 491) is allowed. Students may not enroll in the same course more than three times without approval of the appropriate division director, discipline chair or program chair. A withdrawal does not count as a repeat. When a course has been repeated, the higher grade is used to recalculate the Grade Point Average (GPA). However, all grades are recorded on the student's academic transcript.
- Financial Aid Satisfactory Academic Progress (p. 78) standards (SAP) are used to help students who receive federal and state financial aid make measurable progress toward completion of a degree, certificate or diploma program in a reasonable period of time.
- Standards of Academic Progress (p. 503) (SOP) measures whether students are maintaining a 2.0 or higher cumulative grade point average
- The STAR system of academic alerts is used to send students alerts about how they are doing in their classes at two specific points in the semester: within the first three weeks and by mid-term. STAR Student Success Reports are sent to students' Central Piedmont email accounts.
- Withdrawing from courses (p. 503) is allowed until the 35% point in the term. Students can withdraw from classes using the Registration and Student Planning link in MyCollege. Students receiving financial aid should contact the financial aid office before withdrawing from a course, to find out how they may be affected in terms of eligibility or even repaying aid.

### Records

- Credit by Examination (p. 59) can sometimes be given when students show convincing evidence of special aptitude or knowledge in the course material.
- Credit by examination can be earned through the College-Level Examination Program (CLEP). (p. 64)
- Credit hours (p. 503) are determined according to a formula. 16 contact hours of classroom work equals 1 semester credit hour; 32 or 48 contact hours of laboratory work equals 1 semester credit hour; 48 contact hours of clinical work equals 1 semester credit hour; and 160 contact hours of work experience equals 1 semester credit hour.
- The Maximum credit load (p. 491) a student can take in spring or summer term, without getting overload permission, is 18.
- Medical withdrawals typically involve a student withdrawing from all courses based on a health condition. Requests should be made through the Levine Campus registrar.
- Name and address changes. Students can change their address and contact information in MyCollege, but name changes are handled through Student Records and must be documented by a marriage license, birth certificate or court decree.
- The Transcript Evaluation Process (p. 65) begins automatically when Student Records receives official transcripts. Students are notified by email when their evaluations have been completed. Previous courses completed with a "C" or higher grade from regionally accredited institutions that match Central Piedmont courses are transferred for credit.



- Transcript Requests for Central Piedmont transcripts to be sent to other institutions can be made through MyCollege, including requests for electronic or paper versions.

## Coursework Assistance

### Help with Coursework

- Academic Advising provides students with professional guidance by recommending appropriate course placement and selection, explaining institutional policies and procedures, identifying strategies for success and developing individualized educational plans.
- Course Testing in the Testing Centers or in a proctored setting is required for some courses.
- Free Tutoring is available through the Academic Learning Center in subjects such as math, science, writing and study skills.
- Instructor office hours are held by full-time instructors so that students can meet with them on campus. Online and part-time instructors can be reached through the contact information they have included in their course syllabus.
- The Learning Unit Listing gives contact information for administrators in charge of learning at the college, including the Program and Discipline Chairs, and Division Directors who manage courses and programs offered at the college.
- The Library operates on every campus and online to provide library instruction, interlibrary loan, textbook reserve service, group study facilities, one-on-one research appointments and online research assistance as well as well as integrated IM/webchat reference service.
- Online tutoring is available for free through the Academic Learning Center.
- Central Piedmont offers a wide variety of Programs of Study (p. 91).
- Programs of Study Contact Information can be found in the Central Piedmont directory.
- S.O.S. Math provides extra help to DMA Math students in Traditional, Emporium, and Online DMA classes. Events are held on Central, Levine, and Cato campuses. Events include Extended Math Labs, a Supplemental Instruction Series, and help connecting to tutoring resources.
- TRIO-Student Support Services offers academic support for first generation, low-income and/or students with disabilities. Services include coaching, tutoring, mentoring, financial literacy and more.

### Tips and Information

- The Academic Calendar (p. 10) lists important dates such as holidays, and the the start and end dates for fall, spring and summer terms.
- Online Learning has become one of the most common ways for students to take classes or even complete an entire degree.
- The Online Learning Introduction helps students learn how to be successful taking online classes.
- The Library's Research Databases are a great resource for students doing research for classes.

## Finances

### Costs and Payments

- Please email [fye@cpcc.edu](mailto:fye@cpcc.edu) for cost of attendance estimates of tuition, fees, and textbooks for in-state and out-of-state students taking classes for credit.
- Methods of Payment can be found on the Cashiering web page.

- The Sponsored Programs department handles payments and tuition assistance made on behalf of students by outside agencies.
- The Tuition and Fees (p. 66) catalog page also contains information about refund policies and Sponsored Programs.

### Financial Aid and Veterans Benefits

- Emergency Grants are provided for some students experiencing unexpected financial emergencies.
- Financial Aid helps students afford college by providing aid such as grants and scholarships.
- Financial Aid Programs (p. 76) include Pell Grants, Federal Work Study, Scholarships and more.
- Students are selected for FAFSA Verification each year through a random process. Selected students are required to provide additional documents.
- Some students seek Private or Alternative Loans.
- Financial Aid Satisfactory Academic Progress (p. 78) standards (SAP) are used to help students who receive federal and state financial aid make measurable progress toward completion of a degree, certificate or diploma program in a reasonable period of time.
- Veterans Affairs Education Benefits (p. 84) are provided to veterans and eligible family members within a supportive environment.

### Insurance

- International students may be able to find health insurance options.
- Central Piedmont students in certain programs may be able to purchase Student Insurance plans for accident, health or travel.

### Free or Inexpensive Services

- Bus passes can be purchased in the bookstores by eligible financial aid recipients and are sometimes available through Single Stop.
- Dental screenings and some other Dental Services are available at low cost in the Central Piedmont Dental Hygiene Clinic. Services are performed by students and supervised by faculty. Appointments are scheduled based on student requirements and typically last up to 3 hours.
- Emergency food pantries have been established at several Central Piedmont campuses by Service-Learning in partnership with Loaves & Fishes.
- Free tax preparation and referrals for other community services are available through Single Stop.
- Students may be able to purchase inexpensive haircuts and other services, performed by Central Piedmont Cosmetology students under the supervision of licensed instructors.

## Services and Information

### Support Services

- Bookstores (p. 504). Central Piedmont's Barnes and Noble bookstores sell course textbooks, clothing, gifts and accessories, supplies and electronics.
- Career Services (p. 512) helps students discover and implement career plans and find job opportunities to meet their goals.
- Cashiering offices are located at every campus.
- The Centers for Military Families and Veterans offer Veterans Resources in places where armed forces members (including National Guards/Reservists), veterans and their immediate family members

engage in services promoting their personal and professional development.

- College Security Services provides emergency and non-emergency help, assistance with parking and access, and the college's annual security report.
- Counseling and Advising Services help students with personal counseling, as well as academic and transfer advising on campus and online.
- The Disability Services office helps ensure that students with documented disabilities get equal access to learning, by providing them with academic accommodations and auxiliary aids or assistive technology.
- The Family Resource Center offers a positive, safe and friendly environment to recharge, educate and support students and their families.
- First Year Advising (p. 61) serves the academic and course needs of all first-time, college students.
- First Year Experience (p. 61) supports new and returning students by helping them get started, be comfortable on campus and connect with student services.
- The International Programs and Services office supports the academic and personal growth of international students at Central Piedmont who are on an F-1 student visa. The office assists with admissions, immigration-related issues, resources at the College and information about the Charlotte community.
- The MAN UP Program promotes the personal, academic and social development of male students through mentoring, service learning, workshops, leadership opportunities, motivation, academic coaching, social skills and career development.
- The Positive Community for Women is a female empowerment program sponsored by Counseling Services, with a mission of supporting and uplift college women through workshops, mentoring, community service projects and social/cultural activities.
- Single Stop strives to transform the lives of students with critical needs, helping them overcome financial barriers by connecting students to support systems. Services include free tax preparation, benefits and financial counseling, legal information and referrals to college and community resources.
- Testing and Assessment Centers (p. 64) support the learning process by serving students, faculty and community testing needs, administering a wide variety of tests for instructional placement, certification, licensure and other specialized purposes.
- The Transfer Resource Center offers advising and support services to Central Piedmont students who plan to transfer to a four-year college or university.

### Information

- Terms frequently used at the college are found under Central Piedmont Terminology. (p. 48)
- The Directory can help students reach individuals and departments.
- Housing is not offered at Central Piedmont. Students can contact Single Stop for information about local housing options.
- Maps and Parking information is available for Central Piedmont campuses and locations.

## Student Involvement

### Getting Involved

- Clubs and organizations let students gather and get involved, whether focusing on curriculum programs, or special interests.
- Student Experience can help you connect to resources, meet other students and participate in fun and rewarding activities.
- Central Piedmont Today is the weekly student e-newsletter and blog filled with useful information including important deadlines, policy changes, events at the college and student discounts.
- The Global Learning Office prepares students and faculty for life and work in a global society and facilitates study abroad.
- The Student Government Association represents the interests of all Central Piedmont students and is present on every campus.
- Student Life promotes activities, clubs and organizations which support and enhance learning in the classroom, provide opportunities for student leadership development and honor the rich diversity at Central Piedmont and in the surrounding community.
- The Student Life Calendar lists upcoming festivals, lectures, workshops, recreational experiences, conferences, field trips, service projects, educational exhibits, live music and other co-curricular experiences.

### Events and Performances

- The Arts and Community web page helps students access options for getting involved that include art galleries and auditions.
- Central Piedmont Tix sells tickets for Central Piedmont performances.
- Central Piedmont offers a range of Events and Performances featuring the arts, community service, technology and global competitiveness.
- The Geek Fest is the college's annual technology and innovations event.
- The Sensoria festival is Central Piedmont's signature celebration of literature and the arts.

### Health, Recreation, and Wellness

- Health Resources include walking trails, health screenings, dance and fitness classes, lunch and learns, and much more.
- Recreation and Fitness activities include fitness centers, yoga and intramural sports.
- Recreation and Wellness Courses are offered through Corporate and Continuing Education.

## Technology

### Affordable and Assistive Technology

- Affordable Technology may be available to Central Piedmont students in the form of laptops, Internet and software downloads.
- Assistive Technology is available for students with disabilities through Disability Services and at the campus Libraries.
- Borrow calculators, laptops, books and media from Central Piedmont libraries using your ID card.
- Central Piedmont has open computer labs for all student to use on each campus through the Student Technology Centers, Libraries, and Student Services Support Labs.
- Printing and Copying services are available for students at Central Piedmont campuses.

### Mobile Technology

- Central Piedmont Cloud helps students use Central Piedmont applications on their own devices.

- The Central Piedmont Mobile App gives students access to many Central Piedmont resources, including class schedules and grades, Blackboard, financial information, maps, calendars and the catalog.
- The Wireless Network lets students on any campus connect to Central Piedmont technology.

#### **Technology Help**

- The ITS Help Desk provides support of college licensed applications, and user accounts. Students can call 704.330.5000 for help.

## **Rights, Responsibilities and Safety**

### **Rights**

- FERPA (p. 63), the Family Educational Rights and Privacy Act, protects non-directory student information.
- Central Piedmont is committed to supporting freedom of speech.
- Central Piedmont is committed to equal opportunity and non-discrimination (p. 52).
- Title IX prohibits sex discrimination in all college programs and activities, including but not limited to, admissions, recruiting, financial aid, academic programs, student services, counseling and guidance, discipline, class assignment, grading, recreation, athletics, housing and employment.

### **Responsibilities**

- Academic honesty and integrity are expected of every student.
- College Policies and Procedures (p. 51) relating to students can be found in sections 6 and 7.
- Central Piedmont is a drug free college.
- The Grievance Process is governed by student complaint policies.
- The possession of weapons on college premises or during college sponsored events is strictly prohibited, except as required for preparation of food, instruction, maintenance or acting in the discharge of official duties.
- The college maintains important social media guidelines for students.
- Student behavior is regulated by the Student Conduct policies.

### **Safety**

- College Security Services help students stay safe while at the college.
- The Critical Alert program notifies students in case of emergencies. Signing up for Critical Alert is one of the most important things students can do to remain safe.
- Vaccinations are not required for most Central Piedmont students. However, students enrolled in selected programs may be required to submit proof of current immunization.



# Student Life





# Student Life



The Office of Student Life places priority on activities which support and enhance learning in the classroom, provide opportunities for student leadership development and honor the rich diversity at Central Piedmont and in the surrounding community. Student Life staff are present on each campus.

The Office of Student Life serves as a center for campus programs and activities, a resource for student organizations and a focal point for leadership development opportunities. Student Life provides direction, guidance and resources for numerous Central Piedmont student organizations, including the Student Government Association, Phi Theta Kappa International Honor Society and a variety of student leadership experiences.

Activities sponsored or supported by Student Life include festivals, lectures, workshops, recreational experiences, conferences, field trips, service projects, educational exhibits, discussions, and other co-curricular experiences. A full online calendar of Student Life events and activities can be found on the Central Piedmont app and on the Student Life website.

For further information, visit the Student Life office on any campus, connect with us on Facebook or Instagram, or call 704.330.6584.

## Student Government Association

The Student Government Association (SGA) is the student organization which represents the interests of all Central Piedmont students and is present on every campus. Membership is open to all currently-enrolled curriculum students. The executive committee is elected through the process outlined in the SGA Constitution each spring. SGA's policies are in keeping with those of the Central Piedmont board of trustees, the administration and the laws of the State of North Carolina.

The SGA serves as a:

- student liaison with college administration,
- resource for student clubs and organizations,
- sponsor of annual festivals and service activities, and
- recommending committee for the expenditure of student activities fees.

The SGA president serves as a non-voting member of the college board of trustees and SGA members frequently serve as student representatives on various college committees.

The executive committee of the SGA includes the president, vice-president, secretary, treasurer and public information officer. Senators and representative positions are also available at each campus. Information about joining SGA is available in the Student Life office on any campus or on the Student Government Association website. For more information about SGA, call 704.330.6584.

## Student Clubs and Organizations

Student Life and the Student Government Association offer support, guidance and resources to numerous student clubs and organizations on all Central Piedmont campuses. Some of these organizations focus on special interests and others are directly related to curriculum programs offered at Central Piedmont. Although some clubs have membership requirements, no student organization at Central Piedmont is allowed to discriminate on any grounds. A complete list of student clubs and organizations is available on the Student Organizations page on the Student Life website.

## Student Information

Central Piedmont Today is the weekly student e-newsletter filled with useful information including important deadlines, policy changes, events at the college and student discounts. Find out about parking information, new scholarships and the array of resources available. Visit Central Piedmont Today for weekly issues or add the Central Piedmont Today gadget to a student portal for easy access. For additional information, call 704.330.6231.

## Family Resource Center at Central Piedmont

The Family Resource Center (FRC) offers students a positive, safe and friendly environment to: recharge, educate and support students and their families. The FRC provides resources and connections to programs about smart and healthy living habits, self-care and other valuable life skills and promotes empowering support systems.

The Family Resource Center, located in Room 254 of the Overcash Building on Central Campus, serves Central Piedmont students, staff and faculty on all six campuses.

The Family Resource Center offers:

- A warm, welcoming environment with access to a variety of educational materials focusing on wellness and self-care
- Educational workshops and drop-in programs
- Assistance in identifying college and community resources that may be helpful to student-parents and caregivers
- Referrals to agencies and programs that may be of further assistance

The Family Resource Center also administers the state Childcare Assistance Grant to assist students with the costs of childcare.

For more information, visit the Family Resource Center website or call 704.330.6246.

## Grievance Process for Students

A grievance is a student allegation that a college decision or action is discriminatory or has a negative effect on the student's status at the college.

Any student may request a review of a college decision or action alleged to be discriminatory or to have a negative effect on the student's status at Central Piedmont. However, in accordance with 7.20 Sexual Misconduct Policy, some forms of harassment may also violate the college's policy against Sexual Misconduct under Title IX. When a report of harassment is received, the Title IX coordinator will determine whether it shall proceed under this policy or the Sexual Misconduct Policies and Procedures.

If the decision or action is alleged to be discriminatory, the student should refer to 7.13 Discrimination and Harassment Policy.

If the decision or action concerns a course grade or any other college decision or action, the student should refer to 7.09 Grievance Process for Students.

## Student Conduct

The college reserves the right to maintain a safe and orderly educational environment for students and staff. Therefore, when in the judgment of college officials, a student's conduct disrupts or threatens to disrupt the college community, appropriate disciplinary action is taken to restore and protect the well being of the community.

Students are expected to conduct themselves in accordance with generally accepted standards of scholarship and morality. The purpose of the Student Code of Conduct is not to restrict student rights, but to protect the rights of individuals in their academic pursuits.

College Security Officers and employees have the authority to take immediate actions and begin disciplinary proceedings in response to violations of the Student Code of Conduct.

Students should note that the possession, consumption, or distribution of alcohol or illegal drugs on campuses or any other Central Piedmont site is specifically prohibited. Possession of weapons is regulated by Policy 6.40 Possession of Weapons and by provisions set forth in North Carolina General Statute 14-269.2. Violators will be prosecuted by the authorities.

For more information, go to Policy 7.00 Conduct of Students.



# Learning Resources





# Learning Resources



As a Learning College, Central Piedmont creates environments that generate positive, nurturing, and learning-focused experiences for students in the classroom. To assist students on their academic journey, the college offers a host of resources, such as Library Services, Academic Learning Centers, and others, for students to utilize on their lifelong learning journey.

## Academic Learning Center (ALC)

The Ruth G. Shaw Academic Learning Center (ALC) is a comprehensive tutorial center that provides assistance to Central Piedmont students enrolled in curriculum courses in the following key areas: math, science, writing and study skills. The center is located in Room 103 of the Central High Building on Central Campus. The ALC promotes independent learning and the development of skills necessary to support academic and life-long learning success. One-on-one tutoring sessions are arranged by appointment for students, as well as subject-specific workshops. The Central Campus ALC also houses a computer lab for student use with limited assistance.

Tutoring Services also are available on:

- Cato Campus at Harris Boulevard and Grier Road
- Levine Campus in Matthews
- Merancas Campus in Huntersville

Schedules vary by location. For further information, contact the ALC at 704.330.6474 or visit the Academic Learning website.

## Academic Regulations

### Quick Reference:

- Attendance (p. 502)
- Changing Grades (p. 502)
- Academic Honesty and Integrity (p. 502)

### Attendance

#### Absences

Absences seriously disrupt a student's orderly progress in a course and a close correlation often exists between the number of absences and the

final grade. Although an occasional absence might be unavoidable, the absence does not excuse a student from meeting the requirements of the missed class. The student is responsible for preparing all assignments for the next class and for completing work missed. Instructors are responsible for establishing appropriate course attendance requirements and for informing students of those requirements on course syllabi distributed at the beginning of the academic term.

Students at Central Piedmont may take two days each academic year of excused absences for religious observances required by their faith. For more information, go to Policy 5.11 Attendance Regulation.

#### Class Withdrawals

Students who, for any reason, cannot complete a course must take the responsibility to formally withdraw (W) in order to avoid a failing grade. To receive a "W" grade, students must withdraw prior to the 35 percent date of the class. Final dates for withdrawing from classes are available from class instructors. Students may withdraw by:

1. Contacting registration personnel on any Central Piedmont campus, or
2. Through their MyCollege student account accessed from [cpcc.edu](http://cpcc.edu)

The instructor also may assign a "W" at the end of the term when circumstances warrant such action. A "W" will remain on the transcript. A "W" does not count as credit hours attempted. To receive credit, students who received a "W" must re-register and pay for the course in a subsequent term. Withdrawals may affect financial aid and veteran students.

Class withdrawal for veteran students:

- Financial Aid veteran students need to contact the Financial Aid/VA Office before withdrawing from courses.
- In addition, veteran students need to contact the Central Piedmont Veterans Affairs Certifying Official if withdrawing from any course. Reductions may result in overpayment to the US Department of Education and the US Department of Veterans Affairs.

For more information, go to Policy 5.11 Attendance Regulation.

### Late Entry

To ensure student success and accuracy of reporting, the college prohibits a registered student from entering (attending for the first time) a curriculum class after the 10 percent date. A program dean may make an exception in the case of a college error.

### Changing Grades

The instructor of record is the individual authorized and responsible for personally changing grades for his/her students. In an instructor's absence, the program chair, division director, or dean of the appropriate curriculum area may change a grade for that instructor after consulting with the instructor. In circumstances when the instructor cannot be located for an extended period of time, and valid reasons exist for changing the grade, the division director or dean is authorized to make the appropriate change. The procedures below are to be followed when a grade change is appropriate:

1. The instructor (or division director) will log into WebAdvisor, select the Faculty tab, then select Grade Change Request Form, then Grade Change Request.
2. An electronic notification will be sent to the College Registrar/ Associate Dean, Admissions, Records, Registration and Graduation or a designee, who will also electronically approve the change request



and personally change the grade on the student's electronic record. The change request will be electronically filed in Student Records.

3. Financial Aid and Veterans Affairs students should notify the Financial Aid/Veterans Affairs Office of any grade changes.

## Student Academic Integrity Policy

The purpose of the Central Piedmont Code of Student Academic Integrity (see Student Handbook) (p. 494) is to support the continued growth and development of a strong academic community based on the principles of academic honesty and integrity.

Although the commitment to maintaining and enforcing high standards of academic honesty and integrity at Central Piedmont rests with all members of the college community, faculty members, in particular, are charged with taking measures to preserve, convey and model those standards by example in their own academic pursuits and in the learning environment which they create for their students. Students, likewise, as members of the college's academic community, are obligated to take an active role in the preservation of the standards of academic honesty and integrity and encourage others to respect those standards.

It is the expectation of the college that students maintain absolute integrity and high standards of individual honor in their academic work. Conduct that violates the standards of academic honesty and integrity and which is subject to disciplinary action, may include, but is not limited to: cheating, fabrication and falsification, plagiarism, abuse of academic materials, installation of a computer virus or complicity in academic dishonesty. Any student who violates the Central Piedmont Code of Student Academic Integrity is subject to academic disciplinary action. Such action may include, but is not limited to, recorded entry of the incident by the Office of Student Conduct and Civility, reduced grades or dismissal from college classes, programs and activities.

## Readmission from Suspension

When a student returns after a term of suspension, he or she continues to be advised by the student counselor. If, at the end of the term following suspension, the student's term Grade Point Average (GPA) meets the Standards of Progress, he or she is returned to good standing by a faculty advisor in the program of study. For more information, see Policy 5.10 Grading Policy.

## Grading Policy

### Quick Reference:

- Withdrawal from Classes (p. 503)
- Grade Point Average (p. 503)
- Incomplete Grades (p. 503)
- Standards of Academic Progress (SOP) (p. 503)
- Semester Credit Hours (p. 503)

## Student Grade Point Average

Students are graded according to the following grade point system:

Grade	Point Value	Description
A	4	Excellent
B	3	Very Good
C	2	Satisfactory
D	1	Poor
F	0	Failing

The following grades are not used in computing the grade point average:

AU	Audit
I	Incomplete
P	Passing*
R	Repeat*
S	Satisfactory
U	Unsatisfactory
W	Withdrawal
WN	Withdrawal/Never Attended
X	Credit by Examination

\* P/R grades are to be used in special situations only (e.g. Math Modules, DRE Courses) Effective January 1, 2012

## Student Attendance

Attendance may affect a student's grade in an individual course as well as financial aid eligibility. Consult individual course syllabi for information on how attendance may affect a course grade.

## Student Grade Point Average (GPA)

Students are graded according to the following grade point system.

### Example:

MAT 171, 4 credits, Grade A = 4 points, 4 X 4 = 16  
 ENG 113, 3 credits, Grade D = 1 point, 3 X 1 = 3  
 SPA 111, 3 credits, Grade B = 3 points, 3 X 3 = 9  
 SPA 181 lab, 1 credit, Grade B = 3 points, 1 X 3 = 3  
 ACA 122, 1 credits, Grade C = 2 points, 2 X 1 = 2  
 Total Credits: 12 Total Points: 33  
 Divide 35 points by 13 credits = 2.75 GPA (Grade Point Average)

Three GPA's will appear on the student's academic record:

1. cumulative GPA
2. cumulative program GPA
3. term GPA

Grades earned under the quarter system retain their same value in calculating the GPA. The computer converts the GPA from quarter hours to semester hours for students' combined GPA.

## Semester Credit Hours

- 16 contact hours of classroom work equals 1 semester credit hour.
- 32 or 48 contact hours of laboratory work equals 1 semester credit hour.
- 48 contact hours of clinical work equals 1 semester credit hour.
- 160 contact hours of work experience equals 1 semester credit hour.

## Withdrawal from Classes

Whenever students determine they are unable to complete courses in which they are currently enrolled, it is their responsibility to initiate procedures leading to a formal withdrawal (W) in order to avoid a failing (F) grade. To receive a "W" grade, students must withdraw prior to the 35 percent date of the class. Final dates for withdrawing from a course are announced in the instructor's syllabus. Instructors also may assign a "W" at other times when circumstances warrant such action. A "W" status remains on the transcript and does not count as credit hours attempted. To

receive credit, students who receive a “W” must re-register and pay for the course in a subsequent term.

Financial aid recipients need to refer to the financial aid satisfactory progress policy to determine if schedule adjustments will affect financial aid. Additionally, financial aid students may be required to repay the US Department of Education any of their tuition/fees and/or book charges. Withdrawing from any class may create an overpayment status for Veterans Affairs students. The last day of attendance must be verified for all Financial Aid/VA students.

## Incomplete Grades

An “I” (Incomplete) may be assigned when a student has persisted through the course and has completed at least 90 percent of the requirements for passing the course or when the instructor has determined extenuating circumstances exist. When an “I” is assigned, the instructor must fill out an “Incomplete Grade Form” and submit to the Division Office. A student must resolve an “I” (Incomplete) grade within the time frame specified by the instructor or the division, but no later than six months from the end of the term for which the grade was assigned. When an “I” grade has been resolved, the final grade is recorded with the “I” (e.g., I/B) and the GPA is recomputed. An “I” which is unresolved is changed to the grade of “I/F” after the specified expiration date. For veterans affairs students, the last day of attendance must be verified for any incomplete grades.

## Standards of Academic Progress

### Academic Warning

Students enrolled in a program whose cumulative grade point average falls below 2.0 will be placed on Academic Warning. Students placed on Academic Warning are blocked from registering until they contact their faculty advisors or other designated individuals. Student who improve their GPA the end of the next term are placed back into good standing.

### Academic Probation

Students who are on Academic Warning and do not earn a term GPA of 2.0 or higher are escalated to Academic Probation. Students must contact their faculty advisors and are not able to register until grades are posted. While on Academic Probation, students are limited to registering for the number of courses approved by their faculty advisors. If their GPA does not improve by the end of the term of probation, students are placed on Academic Suspension.

### Academic Suspension

Students who do not raise their term GPA to the required level by the third term of not meeting Standards of Progress, are placed on First Academic Suspension. While on First Academic Suspension, students are referred for academic advisement to student counselors who work with them to develop an academic course of action. If students fail to make appropriate progress during the term of First Academic Suspension, they are placed on Final Suspension and are suspended from enrolling in any curricular classes at Central Piedmont for one term. During that term, students have the option to take developmental classes, ESL, Career Development, Continuing Education classes or no classes.

Students who raise their GPA the next term following any of the above interventions are returned to good standing. However, after Academic Suspension, students must see a counselor to have their registration block removed before registering for the next term. For more information, go to Policy 5.10 Grading Policy.

## Bookstores

### The Right Book, from the Right Place

Central Piedmont campus bookstores ensure students get exactly what they need to be prepared for class when purchasing books and supplies. Campus bookstore staff work closely with faculty members to ensure the correct books are in stock. Visit one of the Central Piedmont bookstores listed below.

#### Extended hours:

To see extended operating hours, visit the Barnes & Noble college website or call a bookstore on a particular campus.

\*Hours subject to change without notice.

### Barnes & Noble - R. Powell Majors Bookstore (Central Campus)

1112 Charlottetowne Avenue  
Charlotte, N.C.  
704.330.6649

#### Academic year operating hours:

Monday–Thursday, 7:30 a.m.–6:30 p.m.\*

Friday, 7:30 a.m.–4:30 p.m.\*

Saturday and Sunday - closed\*

### Barnes & Noble Bookstore at Levine Campus

2800 Campus Ridge Road  
Matthews, N.C.  
704.330.4233

#### Academic year operating hours:

Monday–Thursday, 7:30 a.m.–6:30 p.m.\*

Friday, 7:30 a.m.–3 p.m.\*

Saturday and Sunday - closed\*

### Barnes & Noble Bookstore at Cato Campus

8120 Grier Road,  
Charlotte N.C.  
704.330.4832

#### Academic year operating hours:

Monday–Thursday, 8:00 a.m.–6:00 p.m.\*

Friday, 8:00 a.m.–2:00 p.m.\*

Saturday and Sunday - closed\*

### Barnes & Noble Bookstores at Area Campuses: Merancas, Harris, Harper

#### Academic year operating hours:

Area campus bookstores open 30 minutes prior to the start of any new or continuing education class for a period of one hour.

#### Extended hours:

Area campus bookstores are open one week prior to the start of each term through two weeks after the start of the term. Extended hours are posted at each campus and online at [cpcc.bncollege.com](http://cpcc.bncollege.com). They also can be obtained by calling the Central Campus Bookstore at 704.330.6649.

All forms of payment, except cash, can be used when placing an order online at [cpcc.bncollege.com](http://cpcc.bncollege.com). Purchased books may be requested for pick up at any campus or shipped directly to a student address.

## Online Learning

Online learning represents an innovative means of addressing the complex range of personal, professional and lifelong learning challenges and goals of today's learners. The college offers a variety of programs which can be completed fully online, as well as some programs which can be completed primarily online. In addition, the college offers some traditional face-to-face components, as well as a wide array of fully online individual courses.

Online and digital learning models include:

- **Traditional instructor-led classroom courses** that include virtual learning spaces where course content and opportunities for interacting with the instructor and other class members enhance the classroom experience.
- **Blended or hybrid courses** where some portion of the class or its activities are divided between synchronous (real time) and asynchronous (any time) elements.
- **Solely online courses** where all elements of the course experience and content are administered virtually or fully online.

Students who take online courses will find a full complement of support services and resources designed to foster engagement, excellence and ultimately, success. They include but are not limited to the following:

- Academic Advising
- Admissions and Registration
- Assistance with Financial Aid
- Bookstore Services
- Career Services
- Library and Media Services
- Testing and Assessment

For more information regarding online program offerings, visit Online Learning at Central Piedmont.

For technical assistance, students may call the Central Piedmont ITS Helpdesk at 704.330.5000.

## Global Learning

A goal of the Central Piedmont Global Learning Office (GLO) is to prepare students and faculty for life and work in a global society. The GLO accomplishes this by facilitating the Global Issues Forums, expanding international service-learning opportunities and study abroad as well as strengthening ties with local and international organizations to increase opportunities for workforce development.

Central Piedmont provides opportunities for students, faculty and staff to increase their global awareness and competencies. The College encourages faculty to globalize curriculum, host speakers on international topics and support participation in international community events. Global Learning provides an outstanding opportunity to broaden one's perspective and boost language skills, by offering short-term international programs in more than 10 countries.

In 2015, the College joined the N.C. Scholars of Global Distinction Program. This partnership between UNC-Chapel Hill and N.C. Community Colleges is designed to equip students with the global competencies and skills needed for the 21st century workforce. Participating students expand their intercultural awareness and understanding of the global relevance of their college studies by completing the program's requirements.

Students also are exposed to cultures through the "Global Classroom," a virtually equipped class that connects Central Piedmont students with classes around the world. Study abroad programs have included:

- language immersion in Peru, Germany and France,
- business courses in China and Brazil,
- liberal arts in Italy, France, and the United Kingdom, and
- service projects in Brazil and Tanzania.

A full year work-study scholarship to Germany also is possible through a liaison with the Congress Bundestag Youth Exchange. For more information, contact the Director of Global Learning at 704.330.6167 or visit the Study Abroad website. The Office is located in Room 303 of the Overcash Building on Central Campus.

## Library

The Central Piedmont Library serves a diverse learning community by providing information literacy instruction, relevant resources and point-of-need services designed to foster academic and workforce success.

The Central Piedmont Library is comprised of seven full-service libraries on six college campuses. The library's website serves as the gateway to access online resources, print books, magazines, media, scholarly journals, e-books, audio-books and videos. Resources are available on and off campus and are shared among the campus libraries through courier, fax, email, mobile and the Web, for the convenience of all users. The library is accessible online every day, 24 hours a day.

The Central Piedmont Library provides library instruction, interlibrary loan, textbook reserve service, group study facilities, one-on-one research appointments and online research assistance as well as well as integrated IM/webchat reference service. A comprehensive description of the library as place, resource and service is found on the library website.

### Cato Campus Library

8120 Grier Road  
Charlotte, NC 28213  
704.330.4818

### Cato Law Library

8120 Grier Road  
Charlotte, NC 28213  
704.330.2722 ext. 7819

### Central Campus Library

1241 Charlottetowne Avenue  
Charlotte, NC 28204  
704.330.6885

### Harper Campus Library

315 Hebron Street  
Charlotte, NC 28273  
704.330.4418

### Harris Campus Library

3210 CPCC Harris

Campus Drive  
Charlotte, NC 28208  
704.330.4618

**Levine Campus Library**  
2800 Campus Ridge Road  
Matthews, NC 28105  
704.330.4212

**Merancas Campus Library**  
11930 Verhoeff Drive  
Huntersville, NC 28078  
704.330.4103

## Service-Learning

Service-learning is an innovative teaching method that combines meaningful community service with academic instruction. Instructors who incorporate a service-learning component into their courses offer grade-based incentives for students to commit to service projects that are relevant to course learning objectives. National research data shows that student service-learners learn more about the course content, are more engaged in the classroom, explore career options and assume greater civic responsibility in their community. Central Piedmont research data shows that service-learning has a high correlation with student success.

Service-Learning serves as a liaison between instructors, students and the partnering community agencies that provide service opportunities for students. Service-Learning is an on-campus resource for information about non-profit organizations. It is also a resource for faculty development and training opportunities related to service-learning teaching methods.

In addition to its curriculum-based service, Service-Learning sponsors, supports and coordinates additional service opportunities for students outside the classroom. These programs include Service in Action!, Alternative Spring Break, Martin Luther King Challenge, environmental service projects supporting local initiatives, tutoring programs in local schools and volunteer fairs.

Service-Learning is located on:

- Central Campus, Room 257 of the Overcash Building
- Harper Campus, Room 344 of the 3rd Floor Wing
- Cato Campus, Room 124
- Levine Campus, Room 1402
- Merancas Campus, Room 1108B of the Claytor Building
- Harris Campus, Room 119 of the Harris I Building

Information is available online on the Service-Learning website or at 704.330.6445.

## STAR - Success Through Academic Reporting

STAR: Success Through Academic Reporting, is a college-wide student success initiative. It is the college's Quality Enhancement Plan (QEP). Through this initiative, students receive *Student Success Reports* about their course progress at two specific points in the semester:

- 1) within the first few weeks (before the withdraw deadline) and,
- 2) at midpoint.

These *STAR Student Success Reports* are sent to students' CPCC email accounts.

Additional information may be obtained by visiting the STAR website.

## Workplace Learning Options

### Work-based Learning

Work-based learning (formerly Co-op) is an academic class that allows students to gain practical work experience. Rather than attend class in a traditional classroom, students work with an employer in a position directly related to their field of study. Work-based learning is similar to an internship but students receive academic credit either as an elective or as a required class. By participating, students gain work experience that increases their ability to find career-related employment upon graduation. Employers have the opportunity to connect with students as faculty support them throughout the experience. Work-based learning experiences may be paid or unpaid.

#### Eligibility

Students are accepted from various programs of study, provided they meet the following criteria:

1. Enrollment in a program of study which includes a WBL class as a required course or technical elective.
2. Minimum GPA requirements and successful completion of certain courses determined by the Program Chair or faculty adviser.
3. Recommendation to participate in the WBL class from the Program Chair or faculty adviser.
4. Approval to participate by the Workplace Learning office.
5. Students currently working in their field may be able to receive academic credit for the WBL class at their current job.

Please note that placement is not guaranteed for all eligible students. For more information:

- visit the Workplace Learning Coordinator at a Central Piedmont campus (No coordinator located at Harris Campus)
- call 704.330.6217
- email [workplace.learning@cpcc.edu](mailto:workplace.learning@cpcc.edu)
- visit the Workplace Learning website

Locations for Workplace Learning offices are listed on the website.

#### Internships

Internships are flexible, non-credit bearing work experiences that allow students and recent graduates to gain exposure to their field. Internships enable students to further build related work experience and enhance their portfolios, and are an option in programs where work-based learning is unavailable. Upon successful completion of an internship, participants will receive a certificate acknowledging their achievement.

Eligibility to participate in a non-credit internship varies based on the program of study. Please contact the Workplace Learning office for details.

### Apprenticeship Charlotte

Apprenticeship Charlotte is an unprecedented effort by Central Piedmont to connect talented students to local employers. By combining classroom and workplace learning, both the employers and selected students share a valuable experience that produces immediate results. Students gain



employment and valuable work experience. Employers often cover the cost of tuition, fees and books for apprentices, and many times offer full-time employment upon successful completion of an apprenticeship. Employers benefit from having highly-skilled employees in positions that are difficult to fill. In North Carolina, formal or registered apprenticeships are created by agreements between employers and the N.C. Department of Commerce (NC DOC).

To learn more about participating in an apprenticeship, potential students should visit the Apprenticeship Charlotte website or send an email to [workplace.learning@cpcc.edu](mailto:workplace.learning@cpcc.edu).

# Graduation Services





# Graduation Services



Graduation Services of Central Piedmont awards degrees, diplomas, certificates and Adult High School diplomas to eligible students. In order to receive a credential, potential graduates first must submit the appropriate graduation application according to the following dates:

Potential Graduates	Begin Submitting Applications
Spring	January 1
Summer	May 1
Fall	August 1

There is no application deadline; however, **spring applications submitted by April 1** are guaranteed to be processed in time to participate in the graduation ceremony.

## Graduation Requirements

**Program requirements** - The college reserves the option of changing the requirements for completing a degree, diploma, or certificate program at any time.

### Returning students:

- For students not enrolled in program-related courses for three or more consecutive semesters, requirements for program completion are based on the requirements in effect when they re-enroll in the program, not on those in effect when they originally entered the program.
- An official copy of a student's high school transcript must be on file in order to be admitted to a degree or diploma program.
- Exceptions to course requirements and catalog year changes (beginning Fall 1997) can be made upon approval of the division director. Sometimes such exceptions must be made because courses in an earlier curriculum program may no longer be offered. Students are not placed in a catalog year prior to the 1997-1998 year.

**GPA** - Students must have a program Grade Point Average (GPA) of 2.0 or better to receive a degree, diploma or a certificate. Some programs may require a grade of "C" or better.

**Credentials** - An official high school transcript or equivalent must be on file, showing the date of graduation prior to awarding certificates, diplomas, and degrees.

**Residence** - Students must meet the Curriculum Program Residency requirements of the college.

### Hours/Credits:

- **Degrees** - A minimum of 21 program hours must be earned at Central Piedmont.
- **College Diplomas** - A minimum of 12 program hours must be earned at Central Piedmont.
- **Certificates** - A minimum of thirty percent (30%) of program credits must be earned at Central Piedmont.

For more information on policies governing graduation, please see Policy 5.13 Program Completion Requirements.

## Graduation Process for Degrees & Diplomas

(Students pursuing the Cytotechnology certificate also should follow this process.)

### 1. Meet with an Advisor

Student should meet with their advisors prior to applying for graduation. Advisors check that:

- all transcripts have been received,
- students are admitted to the correct program and under the correct catalog year of requirements,
- any course substitutions and waivers are submitted, and
- students have a course of study for the remainder of their program.

### 2. Submit a Graduation Application

Potential graduates should submit a graduation application to Graduation Services during the time frame published. Applications should be submitted online through a MyCollege student account (if the student is admitted to the program.)

### 3. Receive a Degree Audit Status Update

Graduation analysts review records and email degree audit status updates to students' Central Piedmont email address approximately six weeks after a graduation application is submitted. These evaluations cannot be completed at the time the application is submitted.

### 4. Receive a Copy of the Earned Degree or Diploma

After completion of all requirements, including successful completion of final courses required for graduation, a notation of the degree/diploma and the date of graduation is entered on Central Piedmont transcripts. If ordered, degrees/diplomas are mailed to students approximately eight weeks after graduation. A student's date of graduation is the term when all documents needed for graduation certification are completed.

## Graduation Process for Certificates

### 1. Meet with an Advisor

Students should meet with their advisors prior to applying for graduation. Advisors check that students are admitted to the correct program under the correct catalog year of requirements, that any course substitutions and waivers have been submitted and that students have a course of study for the remainder of their program.

## 2. Submit a Certificate Graduation Application

Students should submit a Certificate Graduation Application during the time frame published, as certificates are not automatically awarded by the college. This form may be submitted online through a MyCollege student account (if the student is admitted to the program.)

## 3. Receive a Certificate Audit Update

Graduation analysts review records and email students degree audit updates approximately 6-8 weeks after an application is submitted. These evaluations cannot be completed at the time the application is submitted.

## 4. Receive the Earned Certificate

After completion of all requirements, including successful completion of final courses required for graduation, a notation of the certificate and the date of graduation is entered on the Central Piedmont transcript. One free copy of the certificate is mailed to the student approximately eight weeks after completion. The student's date of graduation is the term when all documents needed for graduation certification are complete and on file. Additional copies of certificates may be purchased for a small fee.

# Graduation Process for Adult High School Diplomas

## 1. Meet with an Advisor

Students should meet with their Adult High School advisor prior to applying for graduation. Advisors review student education plans and determine a term of graduation. Advisors will notify the Adult High School Graduation Analyst of students who have completed or are completing all requirements.

## 2. Receive Update from Graduation Office

When notified of pending completion by the Adult High School advisor, graduation analysts review records and email diploma status updates to students via their Central Piedmont email in approximately 4-6 weeks.

## 3. Receive the Adult High School Diploma

After completion of all requirements, including successful completion of final courses required for graduation, a notation of the Adult High School Diploma and the date of graduation are entered on the Central Piedmont transcript. The student's date of graduation is the term when all documents needed for graduation certification are complete and on file. If ordered, diplomas are mailed to students approximately eight weeks after graduation.

**Please note:** A minimum of 1 Adult High School credit hour must be earned at Central Piedmont to be awarded the Adult High School Diploma.

# Graduation Ceremony

Central Piedmont holds one graduation ceremony in May of each year. Information is sent to eligible graduates in March, via Central Piedmont email. The ceremony is held to recognize graduates of the spring term, as well as the previous fall and summer terms. Students who will graduate the following summer may request special permission to participate if they have two or fewer courses remaining to complete during the summer term. They should apply for graduation as scheduled and must show proof of registration for their two final courses before permission is granted to participate in the ceremony as a summer graduate.

# Graduation Ceremony Honors

The Graduation with Honors designation, which entitles one to wear cords at a graduation ceremony, is determined by program grade point average (GPA). If a student simultaneously graduates from two or more programs

with an honors level GPA in one program and not in the other, the student will graduate with honors. If a student is eligible for honor cords in both programs, the student will wear only the cord designating the highest honor.

## President's List

To honor students for outstanding academic achievement, the college publishes a President's List at the end of each term recognizing students enrolled in curriculum programs who meet the following requirements:

- In a given term, completed at least 12 hours of credit in courses numbered 100 through 299.
- In a given term, achieved a 4.0 grade point average with no "Incomplete" or "Withdrawn" course status.

## Dean's List

To honor students for outstanding academic achievement, the college publishes a Dean's List at the end of each term recognizing students enrolled in curriculum programs who meet the following requirements:

- In a given term, completed at least 12 hours of credit in courses numbered 100 through 299.
- In a given term, achieved a 3.50 or higher grade point average with no "Incomplete" or "Withdrawn" course status.



# Career Resources



# Career Resources



Central Piedmont provides a comprehensive set of resources to help students and community members reach their career goals.

## For Central Piedmont College Level Curriculum Students and Alumni

### Career Services

Central Piedmont Career Services is committed to helping students and graduates successfully navigate the transition from college to career. Career Services provides holistic career counseling to promote lifelong career development and job search skills by establishing collaborative relationships with students, graduates, faculty, and employers.

### Workplace Learning Programs

A large part of being able to find employment after graduation is getting experience while you are in classes. See the Workplace Learning department for information about gaining experience through internships (paid and unpaid), work-based learning classes (internships for class credit) and apprenticeships (jobs paired with in-depth training at Central Piedmont).

## For All Charlotte Community Members

### Small Business Center

The Small Business Center supports entrepreneurship, small business training, and economic development through innovative continuing education programs to help entrepreneurs start a business, grow a business, or keep pace with the ever-changing small business environment. Services are open to the Charlotte community.

### Job and Career Enhancement Courses (through Corporate and Continuing Education)

Courses are available to strengthen career skills and make job a more competitive job seeker. These courses are often short-term and focused so individuals can take them while they are working or they can get back to their job search quickly. Also included,

are an extensive array of courses that help gain the professional certifications necessary to enter or grow in competitive fields.

### College and Career Readiness Courses

Whether the goal is to attain a high school credential, take courses in English as a Second Language, gain first work experiences, or simply to upgrade skills, College and Career Readiness courses combine job skills with career support and assistance. Visit the College and Career Readiness website to see all programs to help jump start a career.

## Career Services

Career Services helps students and graduates of college credit curriculum programs discover and implement their career plans, and find job opportunities to meet these goals. The following services are provided:

- **Career Counseling:** Currently enrolled students can make an appointment for an individual meeting with a career counselor to assist them in making a decision about their program of study and career. Students may choose to meet in-person with a career counselor on any campus. Career assessments and other electronic resources often are used to help students learn more about themselves, the world of work, and the best fit for both. Students may call 704.330.6433 to make an appointment at any campus.
- **Online Career Information:** The comprehensive Career Services website includes online presentations, links to a wide array of career resources, a Career Guide written by Central Piedmont career counselors and links to area companies.
- **Online Job Postings:** Area employers list job opportunities exclusively for students and alumni on the Career Services online job posting site. Students and alumni can use their Central Piedmont login to view current openings.
- **Resume Assistance:** Resumes may be emailed to [career.services@cpcc.edu](mailto:career.services@cpcc.edu) or an appointment can be made for a complimentary critique. Students also may stop by during drop-in hours held at on Central Campus or Levine Campus. Find advice about how to get started on the online Career Guide.
- **Mock Interviews:** Interviewing skills may be practiced with a career counselor and feedback received while being recorded. Online Interviewing Assistance also is available for mock interviewing so that a video can be sent directly to a career counselor for review.
- **Career Fairs:** A Career Fair is held each spring for students and community members to meet with employers. More information can be found on the Career Fair Web page.
- **On-Campus Recruitment:** Individual companies visit Central Piedmont campuses to recruit students directly in fall and spring semesters. See the Events Calendar for a full list of visits and employer information.

Career Services are available in person on all campuses. For more information, contact Career Services through the Career Services website, call 704.330.6433, or email [career.services@cpcc.edu](mailto:career.services@cpcc.edu).

## Small Business Center

The Small Business Center expands the college's role in supporting small business owners and promoting entrepreneurship as a career option. It continuously develops innovative continuing education programs to help entrepreneurs start a business, grow a business, or keep pace with the ever-changing small business environment. The Small Business

Center is a part of the statewide Small Business Center Network, a community college-funded initiative with a vision to foster and support entrepreneurship, small business training and economic development in local communities across the state.

## Components of the Small Business Center include

- Continuing education (non-degree) courses address critical, practical skills with classes ranging from start up and financing to marketing. Courses focus on:

- Accounting with QuickBooks®
- Business Growth and Development
- Business Plan Writing
- Funding and Financing
- How to Start a Business
- Nonprofit Essentials

- Introductory seminars, workshops and forums to promote awareness and answer student questions
- A Business Resource Center located on Central Campus with books, periodicals, videos and lending library collection, plus client touch-down computer research stations equipped with specialized business software
- Individual counseling to assist small business owners and to offer referrals for those who need additional skills or consulting
- Small business networking events to showcase small business owners, their services and products

For more information, visit the Small Business Center online and by phone at 704.330.6736 or contact Customer Service at 704.330.4223.



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