


Central Carolina Community College

# 2025-2026 Catalog

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# Welcome to CCCC

Welcome to Central Carolina Community College, a top-rated community college within the North Carolina Community College System.

Central Carolina Community College was established to help you achieve your educational goals, whether finishing high school, learning a valuable vocational skill, or completing the first two years of college–at minimal cost–before transferring to a university or four-year college.

At Central Carolina Community College, you can explore different kinds of job opportunities, identify your personal strengths, and start on the path toward new levels of success.

The foundation of Central Carolina Community College's strength is a competent and caring faculty, staff, and administration. We genuinely want to see students succeed and are willing to go the extra mile to ensure that success. Our commitment to student success includes a comprehensive program of student financial and academic assistance.

We are committed to helping our students become well-rounded individuals, and we offer a diversified program of student activities designed to develop social and leadership skills and to make the learning experience enjoyable.

Welcome to CCCC

# College Mission, Vision, & Values

## Mission

Central Carolina Community College provides first-class opportunities for students, serves as a leading workforce partner, and cultivates a workplace where professionals thrive—uplifting the region through education and opportunity.

## Vision Statement

Through a culture rooted in excellence, CCCC strives to be the college of choice:

- **For students:** by ensuring every step—from connection to completion—is designed to lead to family-sustaining jobs and meaningful careers, supported by clear academic and career pathways, student-centered instruction, personalized advising, and opportunities for further education.
- **For workforce partners:** by efficiently delivering talent and training responsive to workforce needs.
- **For community leaders:** by working collaboratively to expand opportunity across the region.
- **For employees:** by being an employer of choice, where well-being, meaningful contribution, and professional growth are prioritized.

## Core Values

CCCC is guided by a shared commitment to:

- **Excellence** - Upholding the highest standards in teaching, learning, and service.
- **Integrity** - Acting with honesty, accountability, and transparency.
- **Respect** - Valuing individual perspectives and treating everyone with dignity.
- **Collaboration** - Working together to achieve shared goals and community impact.
- **Innovation** - Embracing creativity and adaptability in all endeavors.
- **Leadership** - Empowering individuals to lead with purpose, courage, and vision.

Welcome to CCCC

# CCCC is an Equal Opportunity College

Central Carolina Community college serves the public without regard to race, color, national origin, religion, age, sex and sexual orientation, gender, family status, disability status, veteran status, or any health or genetic information.

## Services to Students with Disabilities

Central Carolina Community College has approved the following policy to guide its delivery of services to students with disabilities: No individual shall, by reason of disability, be excluded from the participation in, be denied the benefits of, or be subjected to discrimination under any program or activity for which otherwise qualified. The college may make program adjustments in instructional delivery and may provide supplemental services to enable students with disabilities to participate in activities compatible with their condition and interest. For more information, see Student Accessibility Services (URL: https://www.cccc.edu/support-success/student-accessibility-services).

Welcome to CCCC

## Locations



Central Carolina Community College has locations in Chatham, Harnett, and Lee counties. Discover locations in each county. Explore detailed site listings.

Welcome to CCCC

## College Directories




Questions? We're here! Contact us for inquiries, feedback, or to connect with our team.

For general inquiries, call (800) 682-8353 and you will be directed to the appropriate area.

Department & Office Directory

Faculty & Staff Directory

Welcome to CCCC

# Accreditations

Central Carolina Community College is accredited by the Southern Association of Colleges and Schools Commission on Colleges (SACSCOC) to award associate degrees. Degree-granting institutions also may offer credentials such as certificates and diplomas at approved degree levels. Questions about the accreditation of Central Carolina Community College may be directed in writing to the Southern Association of Colleges and Schools Commission on Colleges at 1866 Southern Lane, Decatur, GA 30033-4097, by calling (404) 679-4500, or by using information available on SACSCOC's website (www.sacscoc.org).

NOTE: The Commission on Colleges should be contacted only if there is evidence that appears to support an institution's significant non-compliance with a requirement or standard.

The college was accredited by the North Carolina State Board of Education in 1970, by the Southern Association of Colleges and Schools in 1972 and accreditation was reaffirmed in 1976, 1987, 1997, 2008, and 2018.

CCCC is a member of the American Association of Community Colleges. Its trustees are members of the Association of Community College Trustees.

In addition to being accredited by the Southern Association of Colleges and Schools Commission on Colleges, a number of curriculum programs are approved by various accrediting or licensing agencies:

- The Barbering program is licensed by the North Carolina Board of Barber and Electrolysis Examiners
- The Basic Law Enforcement Training program is certified by the North Carolina Criminal Justice Education and Training Standards Commission.
- The Computer-Integrated Machining with an emphasis in Tool, Die, and Mold Making program is accredited by the National Institute for Metalworking Skills (NIMS).
- The Cosmetology program is licensed by the North Carolina Board of Cosmetic Art Examiners.
- The Dental Assisting program is accredited by the Commission on Dental Accreditation.
- The Dental Hygiene program is accredited by the Commission on Dental Accreditation.
- The Health Information Technology Program is accredited by the Commission on Accreditation for Health Informatics and Information Management Education (CAHIIM).
- The Medical Assisting Diploma program is accredited by the Commission on Accreditation of Allied Health Education Programs upon the recommendation of the Medical Assisting Education Review Board (MAERB).
- The Nursing programs are approved by the North Carolina Board of Nursing.
- The Radio Broadcasting program is approved by the Federal Communications Commission.
- The Veterinary Medical Technology program is accredited by the Committee on Veterinary Technician Educational Activities (CVTEA) of the American Veterinary Medical Association (AVMA).
- The Medical Sonography program is accredited by the Joint Review Committee on Education in Diagnostic Medical Sonography (JRC-DMS).

Welcome to CCCC

# College Policies

College policies related to visitors and children on campus, drones on campus, student conduct, intellectual property, computer and internet use, housing, communicable diseases, tobacco on campus, solicitation and fundraising, and copyright can be found on the CCCC web site, in the Student Handbook, and in the CCCC Policies & Procedures Manual.

# Academic Calendar

# 2025-2026 Academic Calendar

## FALL 2025

| Event | Date |
|---|---|
| Currently enrolled spring student registration for fall 2025 begins | April 7 |
| K14 Promise Student registration fall 2025 begins | April 14 |
| New & former student registration for fall 2025 begins | April 21 |
| Tuition due for registration on or prior to July 17 | July 24 |
| Registration Ends (16-week, 1st 8-week) | August 11 |
| Last day to de-register/drop (16-week, 1st 8-week) and receive a 100% refund | August 11 |
| Last day to pay fall 2025 registration tuition | August 11 |
| Fall 2025 classes begin | August 13 |
| Last day to add 1st 8-week classes | August 14 |
| Last day to drop 1st 8-week classes (75% refund) | August 18 |
| Last day to add 16-week courses | August 18 |
| First 8-week DE census/Last day for DE students to complete initial assignment | August 18 |
| Last day to drop 16-week courses (75% refund) | August 22 |
| DE 10% point/Last day for DE students to complete initial assignment | August 22 |
| Last day to drop 16-week (75% refund) | August 22 |
| Census reporting due (16-week) | August 25 |
| Labor Day Holiday (no classes) | September 1 |
| Last day to drop 12-week (100% refund) 12-week registration ends | September 9 |
| First 8-week midterm | September 11 |
| 12-week classes start | September 11 |
| Last day to add 12-week | September 15 |
| Last day to drop 12-week and receive (75% refund) | September 18 |
| 12-week DE 10% point/Last day for DE students to complete initial assignment | September 18 |
| Last day to withdraw without a “WF” (1st 8-week) | September 24 |
| First 8-week classes end | October 7 |
| Notification to students of midterm grades (16-week) | October 7-17 |
| 1st 8-week grades due to Registrar's Office | October 8 |
| Student break (no classes) - can be used for possible make-up | October 8-10 |
| Last day to drop for 2nd 8-week classes 100% refund - registration ends | October 10 |
| Last day to remove incomplete from the summer 2025 semester | October 13 |
| Midterm for 16-week classes | October 13 |
| Distance education midterms (online exam dates may vary) - Sanford (Civic Center) | TBD |
| Second 8-week classes start | October 14 |
| Last day to add for 2nd 8-week | October 15 |
| Last day to apply for fall graduation | October 17 |
| Last day to drop for 2nd 8-week (75% refund) | October 17 |
| DE 10% point/Last day for DE students to complete initial assignment-2nd 8-week | October 17 |
| Currently enrolled student registration for spring 2026 begins | October 27 |
| 12-week midterm | October 27 |
| Last day to withdraw without a “WF” (16-week) | November 10 |
| Second 8-week midterm | November 10 |
| New and returning student registration for spring 2026 begins | November 10 |
| Last day to withdraw without a “WF” (12-week) | November 17 |
| Student break (no classes) | November 24-26 |
| Thanksgiving Holiday | November 27-28 |
| Last day to withdraw without a “WF” (2nd 8-week) | December 1 |
| Distance education finals (online exams may vary) - Sanford (Civic Center) | TBD |

| | |
|---|---|
| Classes end | December 12 |
| Grades due to Registrar's Office | December 15 |

## SPRING 2026

| | |
|---|---|
| Currently enrolled fall students registration for spring 2026 begins | October 27 |
| New student & Returning student spring 2026 registration begins | November 10 |
| Tuition due for registration on or prior to November 21 | December 4 |
| Open registration | January 2 |
| Registration ends at 12:00pm | January 8 |
| Last day to drop (16-week, 1st 8-week) and receive a 100% refund | January 8 |
| Spring 2026 classes begin | January 12 |
| Last day to add 1st 8-week classes | January 13 |
| Last day to drop first 8-week classes (75% refund) | January 15 |
| Last day to add 16-week courses | January 15 |
| First 8-week DE 10% point/Last day to complete initial assignment (8-wk) | January 15 |
| Martin Luther King Day Holiday (no classes) | January 19 |
| Last day to drop 16-week courses (75% refund) | January 22 |
| DE 10% point/Last day for DE students to complete initial assignment (16-wk) | January 22 |
| Last day to drop 12-week class and receive 100% refund | February 6 |
| First 8-week midterm | February 9 |
| 12-week classes start | February 10 |
| Last day to add 12-week class | February 12 |
| Last day to drop 12-week class and receive 75% refund | February 17 |
| 12-week DE census/Last day to complete initial assignment (12-wk) | February 17 |
| Last day to withdraw without a "WF" (1st 8 week) | February 23 |
| First 8-week classes end | March 6 |
| 1st 8-week grades due to Registrar's Office | March 9 |
| Notification to students of midterm grades | March 9-13 |
| Last day to remove incomplete from the fall 2025 semester | March 9 |
| 16-week class midterm | March 9 |
| Last day to drop 2nd 8-week class and receive 100% refund | March 9 |
| Student wellness day - no classes | March 10 |
| Second 8-week classes start | March 11 |
| Last day to Add for 2nd 8-week | March 12 |
| Last day to apply for spring graduation | March 13 |
| Distance education midterms (online exam dates may vary) - Sanford (Civic Center) | TBD |
| Last day to drop for 2nd 8-week (75% refund) | March 16 |
| Second 8-week DE 10% point/Last day to complete initial assignment (2nd 8-wk) | March 16 |
| 12-week class midterm | March 23 |
| Currently enrolled spring student registration for summer 2026 and fall 2026 begins | March 23 |
| Student break (no classes) - can be used for possible make-up | April 1-2 |
| Good Friday state holiday | April 3 |
| New and returning student registration for summer 2026 begins | April 6 |
| Graduation practice - Sanford (Civic Center) - ***only attend ONE*** | April 7 & April 8 |
| Second 8-week class midterm | April 9 |
| Last day to withdraw without a "WF" (16-week) | April 9 |
| Last day to withdraw without a "WF" (12-week) | April 16 |
| Last day to withdraw without a "WF" (2nd 8 week) | April 23 |
| Distance education finals (online exam dates may vary) - Sanford (Civic Center) | TBD |
| Spring 2026 classes end | May 7 |
| Grades due to Registrar's Office | May 8 |
| New and returning student registration for fall 2026 begins | May 11 |
| Summer 2026 tuition due by 5:00 PM | May 13 |

| | |
|---|---|
| Spring Graduation Ceremonies | May 14 |

| SUMMER 2026 (BASED ON 4 DAY WEEK) | |
|---|---|
| Currently enrolled spring student registration for summer & fall 2026 begins | March 23 |
| New and returning student summer 2026 registration begins | April 6 |
| New and returning student registration for fall 2026 begins | May 11 |
| Summer 2026 tuition due by 5:00 PM | May 13 |
| Last day to drop classes and receive 100% refund | May 13 |
| Classes begin | May 18 |
| Last day to add 8-week or 10-week classes | May 19 |
| DE 10% point (census date for 8 & 10-week classes)/initial assignment due | May 21 |
| Last day to withdraw and receive a 75% refund (8 week classes) | May 21 |
| Last day to withdraw and receive a 75% refund (10-week classes) | May 21 |
| Memorial Day holiday | May 25 |
| Late session registration ends | June 3 |
| Last day drop Late session class and receive 100% refund | June 3 |
| Late session classes start | June 8 |
| Last day to ADD late session classes | June 8 |
| Distance education 10% point (census date-initial assignment due-late session) | June 10 |
| Last day to drop late session classes and receive 75% refund | June 10 |
| 8-week midterm point | June 16 |
| Notify students of midterm grades | June 16-23 |
| Last day to remove incomplete from spring semester | June 16 |
| 10-week midterm point | June 23 |
| Last day to withdraw without a 'WF' (8-week) | June 30 |
| Student break (no classes) - can be used as possible make-up | July 1 |
| Independence Day Holiday Observance | July 2 |
| Late session class midterm | July 6 |
| Last day to withdraw without a 'WF' (10-week) | July 14 |
| 8-week classes end | July 16 |
| Last day to withdraw without a 'WF' (late session) | July 20 |
| Grades due to the registrar's office (8-week classes) | July 20 |
| Fall tuition due if registered on or before July 9th | July 23 |
| Late session classes end | July 30 |
| 10-week classes end | July 30 |
| Grades due to the registrar's office (10-week classes, late session classes) | August 3 |
| Summer Graduation | August 11 |

# Learning Options at CCCC

Central Carolina Community College offers a wide range of programs to help you reach your goals—whether you're earning a degree, building job skills, or exploring new interests. This includes both **curriculum (credit)** programs that lead to associate degrees, diplomas, or certificates, and **continuing education (non-credit)** programs for workforce training, personal enrichment, or high school completion.

CCCC is proud of its long history of creating innovative programs that respond to the needs of our students, local businesses, and the communities we serve.

Explore your options and discover the path that's right for you.

Learning Options at CCCC

# Curriculum

Programs for college credit are classified as curriculum programs. Central Carolina Community College offers Associate in Arts, Associate in Engineering, Associate in Science, Associate in Arts in Teacher Preparation, and Associate in Science in Teacher Preparation degree programs that transfer to four-year colleges and universities; two-year programs that lead to an Associate in Applied Science degree; and programs that can be completed in one year or less and lead to a diploma and/or a certificate. Articulation agreements with four-year colleges and universities enable graduates to move seamlessly into additional education, if that is their goal.

A strong asset of the North Carolina Community College System is the flexibility in programs. When the job market no longer provides employment for graduates in certain areas, programs can be phased out so more critical labor needs may be met. It is not the purpose of the college to adopt a fixed curriculum; rather, its aim is to modify all programs to meet the ever-changing needs in the fields of employment.

The college reserves the right to cancel any course or program in cases of low enrollment or decreased budget. The college reserves the right to change any curriculum, and such changes may be made without prior notice.

Learning Options at CCCC

# Non-curriculum

The college also offers non-credit courses in basic education and in technical, vocational, enrichment, and general interest areas. These non-curriculum courses do not count toward a college degree or diploma, but a certificate of completion is given and continuing education units are awarded. The Adult High School/High School Equivalency program awards a diploma or certificate. Continuing education classes award a diploma or certificate with continuing education units.

## Continuing Education

Continuing Education provides opportunities for adults, regardless of educational backgrounds, to train and update their skills for employment, develop leadership and civic responsibility, improve in-home and community life, expand knowledge in general education, and develop creativity in the fine arts.

The Continuing Education division awards Continuing Education Units (CEU) for appropriate programs. The CEU is a nationally recognized records device for substantive noncredit learning experiences. A CEU is defined as "10 hours of participation in an organized continuing education experience under responsible sponsorship and qualified instruction or direction." The following are continuing education programs for which CEU's may be earned:

Occupational programs provide pre-employment, on-the-job, and in-service training of personnel for area businesses and industries. Occupational courses are available to the community and may also be developed for specific employer training needs. Courses may be delivered in a classroom, online, or lab environment. These courses may be offered "on site" or at a college location.

Emergency Services programs provide courses to meet the training needs of law enforcement, fire, emergency medical, and rescue services personnel. Its programs develop skilled responders, empowering them to act more effectively in emergencies.

Community Service programs are offered as a part of the commitment of the college to serve the total community. Offered on a day or evening basis, these courses are designed to meet the personal enrichment educational needs of adults in a variety of areas.

## College & Career Readiness

The mission of the College & Career Readiness program is to prepare adults with the knowledge and skills necessary to be successful in postsecondary education and in the workplace. Anyone 16 years of age or older who has been out of school for a minimum of six months, may enroll in College & Career Readiness. The following programs are offered at various sites in the college's three-county service area at no cost.

### *1. Adult Basic Education*

Adult Basic Education is offered to individuals who performed below a high school level on a placement test and seek to improve basic skills in reading, writing, mathematics, and related subjects. These courses are designed to prepare students to transition into the High School Equivalency program or the Adult High School Diploma program.

### *2. High School Completion*

- The High School Equivalency and Adult High School Diploma programs provide adults the opportunity to earn a high school credential.
- High School Equivalency (HSE): The HSE program allows an adult to take a series of tests to demonstrate attainment of the academic skills equivalent to those of a high school graduate. The HSE program supports preparation for both the GED® and HiSET®. The GED® includes four tests and is computer based. The HiSET® includes five tests and offers both computer-based testing and paper-based testing. HSE tests are fee-based.
- Adult High School Diploma (AHS): The AHS diploma program offers students an opportunity to complete the high school credits needed to obtain an adult high school diploma. Course and graduation requirements are in alignment with the standards established by the North Carolina State Board of Education, the local education agencies, and Central Carolina Community College. The AHS diploma is issued jointly by the local education board of the student's residence and the Central Carolina Community College's Trustees.

### *3. English as a Second Language (ESL)/English Literacy*

The ESL program assists students whose first language is not English improve their English speaking, reading, and writing skills. Students may also choose to prepare for the US citizenship test and/or enroll in a computer literacy course.

### *4. Bridges to Living and Learning Academy (B.E.L.L.)*

B.E.L.L. is a program for adults with intellectual or developmental disabilities. Eligible students must be referred by high school teachers, vocational rehabilitation counselors, academic advisors or guidance counselors. B.E.L.L. Academy's emphasis is on improving reading, writing, math, and computer skills; helping adults become more independent; and offering hands-on, real-life career experiences.

### *5. Basic Skills Plus*

Basic Skills Plus is a program that allows students who are enrolled in College & Career Readiness and performing at the adult secondary education level to co-enroll in certain curriculum or continuing education career pathways. Tuition is waived for the first 12 credit hours of a curriculum program or 96 hours of a continuing education program.

## YouthBuild

Central Carolina YouthBuild is a grant-funded program administered by the U.S. Department of Labor that assists youth between the ages of 16 and 24 who have barriers to education and/or employment. Participants are able to complete a high school credential, enroll in a career pathway in Construction Technology, Nurse Aide I or Culinary, and participate in leadership and community development activities. Support services, such as help finding employment, housing, child care, and transportation are offered. Email YouthBuild@cccc.edu for additional information.

## Small Business Centers

The college's small business centers support the development of new businesses and the growth of existing small businesses through training, counseling, and resources. The college operates three small business centers, one in each of the counties within the college's service area. Through the centers, seminars are offered related to small business operations for entrepreneurs and prospective small business owners. Direct counseling and resources are provided to small business center clients. Additionally, the small business centers work in conjunction with other service organizations in the three-county service area to provide resources and support to small businesses. Centers have a special focus of assistance and loan referral for small businesses as needed.

## Customized Training & Industry Services

The customized training program provides education and training opportunities for eligible businesses and industries. Those businesses and industries eligible for support through customized training include manufacturing, technology intensive, regional or national warehousing and distribution centers, customer support centers, air courier services, national headquarters with operations outside North Carolina, and Civil Service employees providing technical support to US military installations located in North Carolina. Resources may support training assessment, instructional design, instructional costs, job profiling, and training delivery for personnel involved in the direct production of goods and services. In order to receive assistance, eligible businesses and industries must demonstrate two or more of the following criteria:

- The business is making an appreciable capital investment.
- The business is deploying new technology.
- The business is creating jobs, expanding an existing workforce, or enhancing the productivity and profitability of the operations with the state
- The skills of workers will be enhanced by the assistance.



## Cooperative Innovative High Schools

## Cooperative Innovative High Schools

***Lee Early College***

The college's Lee Main Campus is home to Lee Early College, an innovative partnership with Lee County Schools. Students earn both a high school diploma and an associate degree in five years. The student body is diverse, but its members are united by their personal motivation and ability to thrive in a college setting.

***Harnett County Early College (HCEC)***

The college's Dunn Center is home to HCEC, which encourages access to and completion of a college degree by year 13 with opportunities for transfer to senior institutions and options for accelerated coursework in the areas of business, culinary, early education, and information technology.

***Chatham Early College***

Chatham Early College is an innovative opportunity that includes a focus on science, math, engineering, and advanced course options and includes applied science programming offered in Chatham County, like electrical systems technology. Ninth graders have the opportunity to earn a high school diploma and an associate degree and transfer credits. Chatham Early College is housed primarily at the Chatham Center for Innovation in Siler City with students visiting the Chatham Main Campus for most college coursework.

# Career and College Promise

Career and College Promise provides seamless dual enrollment educational opportunities tuition-free 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. Central Carolina offers Career and College Promise pathways aligned with the K-12 curriculum and career and college ready standards adopted by the State Board of Education.

Learning Options at CCCC

# Central Carolina Promise Program

The Central Carolina Promise/K14 Program provides recent high school students with free in-state tuition and required student fees for the two academic years immediately following graduation (up to five consecutive semesters). Full details of each county's eligibility requirements can be found on the Central Carolina Promise/K14 website.

# Board of Trustees

**John Bonardi**
Appointed by Chatham, Harnett, and Lee County School Boards (Jointly)

**Jim Burgin**
Appointed by Harnett County Commissioners

**James Crawford**
Appointed by Chatham County Commissioners

**Karen Howard**
Appointed by Chatham County Commissioners

**Derrick Jordan**
Appointment: Chatham, Harnett & Lee County School Boards (Jointly)

**James C. Kelly, Jr.**
Appointed by the Governor

**Patricia Kirkman**
Appointed by the Governor

**Chett Mann**
Appointed by the NC House of Representatives

**Gladys McAuley**
Appointed by the Governor

**Jerry Pedley**
Appointed by the NC Senate

**Julian Philpott – Chairman**
Appointed by the Lee County Commissioners

**Norman Chip Post, Jr.**
Appointed by Chatham, Harnett & Lee County School Boards (Jointly)

**Gordon Springle – Vice Chairman**
Appointed by Harnett County Commissioners

**Bill Tatum**
Appointed by the Governor

**Taylor Vorbeck**
Appointed by Lee County Commissioners

**Jim Womack**
Appointment: Lee County Commissioners

*Current as of April 2025

# Personnel

*(Highest Applicable Credentials Listed)*

**Abels, Lara**
History Instructor
M.Ed., Campbell University

**Absher, Ronald**
Electrical Systems Technology Instructor
B.S., Computer Science, Duke University

**Acevedo, Michelle**
Esthetics Instructor
Cosmetology Certification, the Paul Mitchell School, Fayetteville, NC

**Ainsworth, John**
Information Technology Lead Instructor
M.S., Network Technology, East Carolina University

**Allen, Maria**
English Instructor
M.A., English Literature, Memorial University of Newfoundland

**Allen, Roy**
Dean, Public Safety
M.S., Criminal Justice, University of North Carolina at Chapel Hill

**Alvarez, Marc**
Nursing Instructor
Ed.D., Nursing Education, St. Paul University

**Anderson, Patricia**
Executive Director, Industry Services
B.S., Industrial Engineering, North Carolina State University

**Ashe, Phillip**
Humanities Instructor
M.A., Fine Art, University of North Carolina at Greensboro

**Aucompaugh, Maryann**
Department Chair, Business Technologies
M.A., Healthcare Administration, Franklin University

**Autry, Tracy**
Lead Career and College Promise Advisor
B.S., Business Administration, Franklin University

**Avalos, Elizabeth**
Custodian

**Babb, Jennifer**
Career and College Promise Advisor
B.A., Communication, North Carolina State University

**Baker, David**
Lead Instructor, Sciences
Ph.D., Physics, North Carolina State University

**Baker, Randy**
HVAC Technician
A.A.S., HVAC, Fayetteville Technical Community College

**Balmori, Stephanie**
English Instructor
M.A., English, University of South Alabama

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J.D., Wake Forest University

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**Villalta, Cesar**
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**Wilkins, Karen**
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**Wilson, John**
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**Wimberly, Mari**
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A.A.S. Nursing, South College

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**Zamudio, Samantha**
Education Navigator

**Ziblay, Lisa**
Custodian

**Ziebart, Jason**
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M.A., English, North Carolina State University

**Zimmerman, Jason**
Ground Technician



# General Admissions Information

Central Carolina Community College welcomes all students and does not discriminate based on race, color, national origin, religion, age, sex, sexual orientation, gender identity, family or veteran status, disability, or any health or genetic information.

To enroll in a curriculum (credit) program, students must have a high school diploma or high school equivalency.

If you do not meet these requirements, you may still be eligible to enroll after meeting with the Vice President of Student Services or their designee to discuss your options.

Our admission policies follow state guidelines (1D SBCCC 400.2).

Admissions

# Onboarding and Advising & Student Services Divisions

The purpose of the Onboarding and Advising and Student Services Divisions is to assist students with various aspects of their education, from admissions through graduation. More specifically, Onboarding and Advising handles admissions, testing, registration and records, graduation ceremonies, and transfer assistance. Student Services handles athletics, financial aid, veterans' benefits assistance, assistance to the disabled, coordination of student activities, and strategic initiatives such as TRIO.

Admissions

# Open Door Policy

All 58 campuses of the North Carolina Community College System operate under an "open door" admissions policy to all applicants who are legal residents of the United States. This means that any person, whether a high school graduate or non-graduate, who is eighteen years old or older and who is able to profit from further formal education, will be served by the institution. An "open door" policy, however, does not mean that an applicant will not have to meet additional admissions requirements set for specific, individual curriculum programs. Such requirements can be found in this College Catalog (also available online), a curriculum guide sheet, or from an Education Navigator. Students who withdraw from such programs must meet these specific program admissions requirements, plus any new or modified ones, should they wish to attempt to re-enter the program. The college reserves the right to limit enrollment in a curriculum program to a number that can be accommodated by the resources of the college and to satisfy accreditation standards.

The college may refuse admissions to applicants who meet at least one of the following exceptions:

1. Admissions may be denied to any applicant during any period of time that they were suspended or expelled from any other educational entity.
2. Admission may be denied to any applicant to protect the safety of the applicant, student body, faculty/staff, and library patrons when there is an articulable, imminent, and significant threat by documenting (a) the detailed facts supporting the rationale for denying admission, (b) the time period within which the refusal to admit the applicant shall be applicable, and (c) the conditions upon which the applicant would be eligible to be admitted.

The Dean of Student Onboarding and Success, working through the Admissions staff, will recommend to the Vice President of Student Services if an applicant should be denied admission based on safety concerns. The Vice President of Student Services, who is designated as the Chief Admissions Officer of the college, will then notify the applicant in writing of the college's admissions decision. Any appeals of admission denials should be made in writing directly to the Office of the College President.

Admissions

# How to Apply

All applicants to CCCC will be provisionally admitted to the college. To be officially accepted into a curriculum program, a student must complete all curriculum program admission requirements. Only students who have been officially accepted into a curriculum program will be eligible to receive federal aid, Veteran's benefits, or third-party sponsorship.

- Complete and submit the admission application.
- Submit an official high school transcript or high school equivalency. Official transcripts are required. A transcript is an "official transcript" when it is received by the college through the mail or secure electronic document provider directly from the high school, college, or other institution. It is the applicant's responsibility to request that transcripts be sent.
- Students who desire to have the Student Records and Registrar's Office evaluate any previous coursework for transfer credit evaluation must request transcripts from previously attended institutions of higher education. If transcripts are not requested by the student and received by the college, the student is therefore forfeiting any potential credit and must take all of the prescribed courses in their chosen program of study here at the college.

- Students must satisfy the placement testing requirement by meeting the state-required waiver or qualifying GPA by submitting an official high school transcript and/or official placement test scores, or taking the placement test.
  **NOTE:** *Applicants who take the placement test, but do not meet the minimum required test scores may be required to take developmental courses. These courses may lengthen the time required to complete a credential. See specific course descriptions and prerequisites/corequisites. Only students who graduated high school more than 10 years ago or who have completed high school in another country are eligible to take the placement assessment. The following students may be exempt from taking the placement test at CCCC*:
  ● *Beginning Fall 2025 semester, students who have graduated high school with a qualifying unweighted GPA OR have acceptable SAT/ACT scores within the last ten years.*
  ● *Students who have acceptable SAT, ACT, Asset, Compass, or Accuplacer test scores within the last five to ten years.*
  ● *Students who have transfer credits for English and mathematics courses required for the curriculum major. If students switch to a major requiring additional English and/or mathematics courses for which they do not have transfer credits, they may need to take the placement test or be evaluated by the placement model to determine appropriate proficiency level.*
  ● *Students who enter CCCC under the terms of an articulation agreement with another college, provided they have completed the English and mathematics courses required for the articulated program.*
  ● *Students who have acceptable Advanced Placement (AP) credits earned in the last ten years for required English and mathematics courses.*

- Students using VA benefits must obtain all college transcripts from all previously attended institutions of higher education.
- Students applying for competitive academic programs (Dental Programs, Medical Sonography, Medical Assisting, Nursing, Veterinary Medical Technology, and Esthetics) must submit college transcripts from all previously attended institutions of higher education.
- Students must supply additional information if requested. The admissions decision for the Associate Degree Nursing, Dental Assisting, Dental Hygiene, Medical Sonography, Medical Assisting, Physical Therapist Assistant, Practical Nursing, Veterinary Medical Technology, and Certificate in Esthetics is made based on students meeting minimum requirements. Limited Enrollment programs enter students in a number of ways, including: maintaining a list and entering students based on date of application, entering students based on a ranked GPA, or by using a ranked point system. These requirements and processes are college approved policies and processes. Students must meet the Minimum Admissions Criteria in order to apply by the published application deadline. Please see the individual program curriculum descriptions for additional information. Additional admission procedures and requirements for certain programs are listed in the catalog and on the individual program website. The programs are:
  ● Associate Degree Nursing
  ● Basic Law Enforcement Training (BLET)
  ● Certificate in Esthetics
  ● Cosmetology Instructor Training
  ● Dental Assisting
  ● Dental Hygiene
  ● Esthetics Instructor Training

- Medical Assisting
- Medical Sonography
- Practical Nursing
- Veterinary Medical Technology

Admissions

# Readmission of Military Students

The college will promptly readmit a student with the same academic status as they had when last attending or accepted for admission if they cannot attend school due to military service. The student must notify the college of the military service and intention to return through oral or written notice of such service as far in advance as is reasonable under the circumstances, or by an attestation of military service that necessitated the student's absence from school upon readmission. Notification can be provided to Student Onboarding and Success, the Registrar's Office, or the Office of the Vice President of Student Services. No notice is required if precluded by military necessity, such as service in operations that are classified or would be compromised by such notice. Notice of intent to return to school must be within three years after the completion of the period of service. If a student is hospitalized or convalescing due to an illness or injury incurred or aggravated during the performance of service, the student must notify the college within two years after the end of the period needed for recovery from the illness or injury. A student who fails to apply for readmission within these periods will be subject to the college's established general practices concerning leave of absence.

Admissions

# Placement Testing

Student Onboarding and Success administers the placement test to students who have been out of high school more than 10 years or graduated high school outside of the United States. The purpose of the test is to assess a student's readiness for the requirements of the curriculum. Test scores are used for academic advisement and course placement, to include a transitions course or a math or English course with a co-requisite course if needed.

Students enrolled in select Health Science programs are required to complete additional testing. Please see the program's Education Navigator for further information.

The following placement testing policies will apply:

1. Students must present photo identification in order to take the placement test.
2. Placement test scores will be valid to use for placement for ten (10) years.
3. Students are permitted to take the placement test two times total as a student at CCCC, twice within five (5) years. If a student retests, the highest score on each section will be used for advisement and course placement.
4. Students are not permitted to take the placement test if they are currently enrolled in a developmental course.
5. Placement test scores are transferable to other colleges with permission of the student.
6. It is the discretion of the Dean of Student Onboarding and Success and/or the Associate Vice President of Onboarding and Advising to grant or deny further retesting attempts or testing exemptions.

Admissions

# Self-Service

Students can use Self-Service to collaborate with their faculty advisors and Education Navigators to develop a comprehensive academic course plan for current and future semesters. Self-Service also provides students with access to transcripts, plans of study, and other important advising information.

***Logging into Self-Service***

Self-Service is an online academic planning tool where CCCC students can:

- Communicate with Education Navigators and faculty advisors.
- Create course success plans.
- Plan for upcoming class registration periods to have faculty advisors approve course selections
- Once your advisor has approved the course selections, students can register themselves via Self-Service
- Self-Service can be accessed at https://www.cccc.edu/self-service/

For technical assistance contact (919) 718-7201 or (800) 682-8353 ext. 7201

# Admission Categories

Central Carolina Community College welcomes students from a variety of educational backgrounds. This section outlines important admissions information for applicants with unique circumstances, including home-schooled students, graduates of correspondence schools, undocumented and DACA applicants, international students, and individuals enrolling as special credit or non-degree seeking students. Review the requirements carefully to ensure a smooth admissions process.

Admissions Categories

# Home-schooled Applicants

Home-schooled applicants must provide the following documentation for admission:

- Proof of listing with the N.C. Division of Non-Public Education (DNPE).
- A full, final high school transcript including a list of all courses taken, the term and year courses were taken, final course grades, and a final grade point average. The transcript should include the official school name and the administrator's signature (usually parents or guardian).

**NOTE:** *All academic instruction in core subjects MUST come from parents, legal guardians, or a member of the household and not from anyone outside the household. (Two household schools are permitted to work together.) Colleges generally assume that a member of the household was the supervising instructor for each of the core subjects unless contrary evidence is presented. The home school may be asked to present a statement that a member of the household was the instructor of the core subjects. The NCDNPE can provide information identifying which subjects are core subjects.*

- Nationally standardized test scores for the last two years of home school instruction, measuring competencies in verbal and quantitative areas. The home school is permitted to establish its own minimum scores on this test. The home school established minimum score must be indicated on the transcript and scores must meet or exceed such scores.
- Failure to meet all transcript verification requirements may result in the college's inability to certify the secondary school's validity for the purpose of Title IV funding.
- Persons home schooled may also elect to take the high school equivalency exam from their local community college in lieu of a high school diploma. If the student passes this test, the high school equivalency is equivalent and can take the place of a high school diploma. The cost of the high school equivalency exam is minimal.

Admissions Categories

# Correspondence Schools for High School Diplomas

Central Carolina Community College will accept any correspondence school registered with the state of North Carolina's Department of Non-Public Education for admission to the college. However, the college may be unable to certify the validity of some schools for the purpose of Title IV funding.

While Central Carolina Community College does not endorse any of the following schools, successful completion of one of these programs will fulfill the high school graduation admissions requirement for the college. This is not an exhaustive list.

- American School
- A Becka Academy
- Continental Academy - degree must have been received after July 2006
- Keystone National High School
- Penn Foster, formerly Thompson Educational Direct - degree must have been completed after November 1, 2002
- Ashworth High School (part of Ashworth University) formerly James Madison High School

If you have questions about another correspondence school, please contact the Registrar's Office. Correspondence schools must have regional accreditation at the time of graduation for the college to accept the diploma. For more information about regional accreditation, please go to Regional Accreditation for Online Schools (URL: https://www.thoughtco.com/regional-accreditation-for-online-schools-1097947) or Council for Higher Education Accreditation Directory (https://www.chea.org/directories).

Admissions Categories

# Undocumented Immigrant Applicants

Under the State Board of Community Colleges' rule "Admission to Colleges," undocumented immigrants will be admitted if the following requirements are met:

- Must be a graduate of a United States public high school, private high school, adult high school, or home school that operates in compliance with state or local law or must have completed a High School Equivalency Diploma
- Must pay the out-of-state tuition rate
- Undocumented immigrants will be permitted to register for classes once the late registration period begins.

Additionally, when considering a program of study, undocumented immigrants should be aware that federal law prohibits states from granting professional licenses to undocumented immigrants (see NCCCS CC-13-019, 8 U.S.C. 1621(a) and (c)(1)(A) and SBCC Code 1D SBCCC 400.2(b)(5)). Further, students lawfully present in the United States shall have priority over any undocumented immigrant in any class or program of study when capacity limitations exist, such as programs with competitive-entry waitlists.

Admissions Categories

# Deferred Action for Childhood Arrivals (DACA) Applicants

Applicants who have been granted deferral under the DACA program are responsible for presenting documentation to establish that they have DACA classification. This documentation includes the I-797, Employment Authorization Document (EAD), and social security card. DACA students are held to the general admission standards and procedures and pay the out-of-state tuition rate. Per State Board of Community College Code 1D-SBCC 400.2, Deferred Action Childhood Arrival (DACA) students may not be eligible to sit for licensure but are not prohibited from enrolling in a health science or professional service program that leads to licensure. However, acceptance into the college does not guarantee acceptance to a specific program. DACA students MUST meet all of the program requirements for consideration and acceptance as does any other student. Verified DACA students do not have to wait until the late registration period to enroll in classes.

Admissions Categories

# Students Needing State Authorization

Central Carolina Community College has been approved by North Carolina to participate in the National Council for State Authorization Reciprocity Agreements (NC-SARA). SARA is an agreement among member states, districts, and territories that establishes comparable national standards for interstate offering of postsecondary distance education. CCCC is approved to serve students in 49 states (all but California), the District of Columbia, Puerto Rico and the U.S. Virgin Islands (St. Thomas, St. Croix, and St. John).

Students who live in a state or pursue programs of study other than those for which the college is approved will be admitted to CCCC, but will not be allowed to register until authorization has been obtained. Students should consult with their state prior to enrolling in programs that require licensure or certification.

Central Carolina Community College determines a student's location for the purposes of state authorization at the time of a student's initial enrollment. If a student's location changes, a Change of Student Data Form is completed by the student and is processed by the Student Records and Registrar's Office.

Admissions Categories

# International Students

CCCC does not currently accept international applicants who do not reside in the United States. Central Carolina Community College does not issue any student an I-20 required for an F-1 immigration student visa.

Admissions Categories

# Special Credit Students

An applicant 18 years or older may enroll as a special credit student without specifying an educational objective or program of study. To be admitted, the special credit student needs only to complete an application. It is to the student's advantage to declare an educational objective and to complete all of the admission procedures as soon as possible after enrollment. Special credit students are not eligible to receive financial aid or veteran's benefits and must meet all prerequisite requirements for each course enrollment.

# Residency Status for Tuition

The tuition charge for persons who have been legal residents of North Carolina for at least 12 months is less than for nonresidents. Session Law 2013–360 directs the University of North Carolina (UNCGA), the North Carolina Community College System (NCCCS), the North Carolina State Education Assistance Authority (NCSEAA), and the North Carolina Independent Colleges and Universities (NCICU) to create a centralized, uniform process for determining residency for tuition purposes and for administration of state financial aid.

Residency Status for Tuition

## Purpose and Background

## Purpose and Background

The state of North Carolina partially subsidizes the cost of tuition for all students whose domicile, or permanent legal residence, is in North Carolina. Since it first became a state, North Carolina has abided by the philosophy that an educated public is necessary to a democratic government and that the State, therefore, has an obligation to provide for the education of its people. Article IX, Section 9, of the State Constitution states: "The General Assembly shall provide that the benefits of the University of North Carolina and other public institutions of higher education, as far as practicable, be extended to the people of the State free of expense." Therefore, while North Carolina welcomes out-of-state students it considers the privilege of providing a reduced in-state tuition rate to be a taxpayer benefit.

This centralized process is known as the Residency Determination Service (RDS). In order for a student to receive the benefits of in-state tuition, a residency determination from RDS is required as part of admission. To learn more about residency and complete a determination, please visit the North Carolina Residency Determination Service website.

Residency Status for Tuition

# Residency Determination Service (RDS)

The purpose and mission of RDS is to provide leadership and administration of residency determinations in accordance with North Carolina residency laws and applicable federal statutes. The RDS goal is to provide students access to transparent information and the opportunity to claim NC residency in a simple, accurate, and straightforward manner. For more information on residency for tuition purposes contact RDS at:
Email: rdsinfo@ncresidency.org
Phone: (844) 896-2411
Fax: (919) 835-2427
North Carolina Residency Determination Service website

Residency Status for Tuition

## Determining Residency Status

## Determining Residency Status

The specific requirements for establishing residency for tuition classification purposes are prescribed by state law. A North Carolina resident for tuition purposes is a person or a dependent person (dependent according to IRS tax code) whose parent or legal guardian has established and maintained legal residence in North Carolina for at least 12 months. Residence in North Carolina must be legitimate and be a permanent situation rather than just for the purpose of maintaining a residence prior to enrollment at an institution of higher education.

Under North Carolina law, to qualify for in-state tuition, you must show that:

- You have established your legal residence (domicile) in North Carolina.
- You have maintained that domicile for at least twelve (12) consecutive months before the beginning of the term.
- You have a residentiary presence in the state.
- You intend to make North Carolina your permanent home indefinitely (rather than being in North Carolina solely to attend college).

Other persons not meeting the 12-month legal residence requirement may be classified as North Carolina residents for tuition purposes only if they fall within one of the limited categories authorized by the North Carolina Legislature. All other persons are ineligible for classification as a North Carolina "resident for tuition purposes" and will be charged out-of-state tuition. Learn more about residency and complete a determination.

Information relating to claimed North Carolina Residence for tuition purposes will be required from all applicants. The NC Residency Determination Service, RDS, provides the sole determination for NC residency status. Applicants seeking reclassification who claim to be North Carolina residents must work through RDS for reclassification or to appeal. When a student is reclassified, the student must notify the college to have the new status applied to the student's account. Individuals on active military duty in North Carolina and their dependents may be granted waivers that reduce tuition to in-state rates. The federally mandated Choice Act allows recently discharged military personnel or their dependents certified to use VA benefits to be awarded in-state rates. The burden of establishing facts that justify classification of a student as a non-resident entitled to in-state tuition rates is the responsibility of the applicant. Decisions by school officials will be based on the requirements of the North Carolina General Statutes and regulations specified in the Residence Manual to assist the public higher education institutions for North Carolina in the matter of student residence classification for tuition purposes.

Applicants with questions not covered by this section should read detailed guidelines provided in the North Carolina State Residence Classification Manual or information provided on the Residency page on the CCCC website. The Residency Status determination is a part of the application; however, applicants will be required to complete a more in-depth form if reclassification or waiver is requested.

# Tuition

The tuition rate is set by the North Carolina General Assembly and is subject to change. Visit Tuition and Fees for the most up-to-date information.

A senior citizen may audit a course section without payment of any required tuition or registration fee.

## Refund Policy–Tuition

A tuition refund shall not be made except for the following circumstances:

- A 100% refund shall be made if the student officially drops prior to the first day of the academic semester as noted in the college calendar. Also, a student is eligible for a 100% refund if the class in which the student is officially registered is canceled.
- A 75% refund shall be made if the student officially withdraws from classes prior to or on the official 10% point of the course session or semester. State Board of Community College Code IE SBCCC 900.

Should a student, having paid the required tuition for a term, die during that term (prior to or on the last day of examinations), all tuition and fees for that semester may be refunded to the estate of the deceased. This is state policy as stated in the North Carolina Administrative Code, Chapter 23 2D.0202.

Tuition

# Business Office

Receipt of tuition and fees, collection of parking fines, and payment of refunds are major responsibilities of the Business Office. The Business Office is open between 8:00 a.m. and 5:00 p.m. daily, Monday through Thursday, and between 8:00 a.m. and 3:30 p.m. on Friday, excluding holidays. The Business Office is also open during evening hours during the registration period at the beginning of each term.

Tuition

# Bookstores

The bookstores on the Lee Main Campus and the Harnett Main Campus are operated by Follett Higher Education Group. Students may come on campus to purchase books and supplies, or they may visit the Bookstore website to purchase books and course materials and have them shipped directly to their home. The bookstore offers textbooks, course materials, school supplies and clothing and gift items featuring the college logo.

Follett Higher Education offers a wide variety of options to students, including a rental program and ebooks.

Buybacks are conducted daily to give the students an opportunity to sell their books.

The hours of operation are posted on the bookstore website listed above and also on the college's website. Special hours are observed during registration and from the first day of class through the drop add period of each term.

Tuition

# Special Apparel and Equipment

Students enrolled in the Automotive Technician, Barbering, Basic Law Enforcement Training, Cosmetology, Dental Assisting, Dental Hygiene, Esthetics, Machining, Medical Assisting, Medical Sonography, Motorcycle Mechanics, Associate Degree Nursing, Tool and Die Making, Welding, and Veterinary Medical Technology curriculums will be required to purchase special items of apparel and/or equipment, such as uniforms, lab jackets, tools, gloves, etc. Most of these items may be purchased in the college bookstore.

# Fees

In addition to tuition, there are a few required fees that help support student services, technology, campus safety, and course materials. This section explains what each fee covers—like your student activity fee, graduation fee, and any course-specific costs—so you know exactly where your money is going.

Fees

# Student Insurance

A $1.60 student accident insurance fee will be charged each semester to curriculum students. While stringent precautions are taken to ensure all students safety, it is in the best interest of all students to provide some measure of insurance protection. The college will maintain a group policy providing insurance protection, and all students will be covered. International students are encouraged to secure more complete coverage.

Fees

# Malpractice Insurance

A $10 malpractice fee will be charged each semester for students enrolled in applicable courses. All students in healthcare and personal service programs must have malpractice insurance. For questions regarding the malpractice insurance policy, please contact the Business Office.

Fees

# CAPS Fee

A campus access, parking, and security fee of $50 per semester is charged to all curriculum students.

Fees

# Student Activity Fee

A $35 activity fee is charged to curriculum students for the fall and spring semesters. A $5 activity fee is charged to all curriculum students for summer semesters. The student activity fee provides the revenue necessary to provide services and activities for the student body. Typically, student activity fees provide the following benefits: student handbook, student ID's, parking stickers, various student activities, guest speakers, as well as other events. The student fee also funds the CCCC intercollegiate athletic program.

Fees

# Computer Use and Technology Fee

A $48 technology fee is charged each semester to all curriculum students. The computer use and technology fee is used to support the procurement, operations, and repair of computer and other instructional technology including supplies and materials that support technology.

Fees

# Ceremony Fee

A $5 ceremony fee will be charged each semester to all curriculum students. The ceremony fee will help fund the cost of graduation ceremonies, cap and gowns, diplomas, etc.

Fees

# Distance Education Fee

A $15 distance education fee will be charged for each course taken online. hybrid, blended, video-conference, web-conference, and lab co-requisite courses are exempt from this fee. This fee is used to support the licensing, hosting, and maintenance of online technologies used in distance education, including the learning management system, plagiarism detection service, and streaming video content. No separate fees or costs associated with verification of student identity are required.

Fees

# Course Specific Fees

Course specific fees may be associated with certain courses. These fees will be noted on student's registration statements and will vary by course.

Fees

# Breakage Fee

Breakage, damage, or loss due to student negligence, carelessness, or other mishandling of school supplies, materials, or equipment is the responsibility of the student. The student will be required to pay for such items and may be subject to disciplinary action.

Fees

# Follett ACCESS Book Fee

The Follett ACCESS book fee is added to courses that utilize the Follett ACCESS's first-day inclusive access program and covers the cost of the digital resources associated with a designated course. The cost of the required course & digital materials using Follett ACCESS are added with the tuition and fees during registration. Financial aid can be used for the Follett ACCESS materials.

Students may opt out of purchasing the Follett ACCESS digital course materials provided in select CCCC classes. Students must inform their instructor of their intent to opt out and complete the Opt Out of Follett Access form by no later than 5:00 pm on the census (10%) date of the course. Students' cougarmail.cccc.edu email address must be used to access the form. For more information about opting out, please contact Verenice Soto (919) 718-7217.

# Financial Aid

Financial aid options are available at Central Carolina Community College for degree-seeking students in qualified programs. CCCC awards federal and state grants, scholarships, and/or work-study employment. Eligible students may receive one or more of these types of financial aid to assist with tuition, fees, books, and other educational related expenses.

The Financial Aid Office utilizes the Free Application for Federal Student Aid (FAFSA) to determine student eligibility for financial aid. All students are encouraged to complete the FAFSA as early as possible each year

To learn more about the types of aid available, visit Financial Aid.

Financial Aid

# Financial Aid Eligibility Requirements

In order to receive financial aid from federal and state programs and to continue one's eligibility once aid has been awarded, the following criteria must be met:

- Be a U.S. citizen or eligible non-citizen
- Not be in default of any prior student loan or owe monies to any Federal Student Aid program
- Have a high school diploma or a General Education Development (GED) certificate, or have completed homeschooling. If you don't, you may still be eligible for federal student aid if you were enrolled in college or career school prior to July 1, 2012. Visit Eligibility Requirements for additional information
- Have a valid Social Security number
- Demonstrate financial need
- Apply for admissions to CCCC and have all admissions requirements met:
  - Submit an official high school transcript from an accredited high school/home school or an official GED transcript.
  - Be enrolled in an eligible program as a regular student seeking a degree or certificate.
  - Be currently maintaining Satisfactory Academic Progress (SAP). The SAP Policy can be found at: SAP Policy.

Financial Aid

# Dependency Status for Financial Aid

A student will need to determine whose information to report on the FAFSA. An independent student will report income and asset information for themselves and spouse, if married. A dependent student will report income and asset information for themselves and parents. Not living with parents or not being claimed by them on tax forms does not determine dependency status for federal student aid. For more information, you may visit The Federal Student Aid website.

Financial Aid

# Financial Aid Application Process

Students interested in applying for federal and/or state financial aid must:

- Create a Federal Student Aid (FSA) username (ID) and password
- Complete the Free Application for Federal Student Aid (FAFSA) on the Federal Student Aid website.

**Review the FAFSA:**
The FSA ID has replaced the FAFSA PIN. The FSA ID confirms your identity when you access your financial aid information and electronically sign Federal Student Aid documents. If you do not already have an FSA ID (different from the old PIN number) you can create one when logging into studentaid.gov. You can still create an FSA ID if you have forgotten or do not have a PIN.
OR
Request a paper FAFSA by calling (800) 433-3242; for hearing impaired contact (800) 730-8913.

**Follow up:**
You will receive a FAFSA Submission Summary at the address and/or the email address you listed on the FAFSA. This form is for your records. The FAFSA Submission Summary is NOT an award letter. You will receive notification from the Financial Aid Office when or if:

- additional information is required to complete your application
- your eligibility status has been determined
- an award has been placed on your student record

Financial Aid

# Federal Aid Enrollment Status for Credit Hour Programs

Federal student aid is awarded based on the expected family contribution (EFC) and SAI (Student Aid Index) as determined by the FAFSA and prorated depending on the student's enrollment status. Full-time awards are subject to change based on the Federal Pell Grant LEU (Lifetime Eligibility Used). Federal student aid is awarded based on

the Student Aid Index (SAI) as determined by the FAFSA and prorated depending on the student's enrollment status. Full-time awards are subject to change based on the Federal Pell Grant LEU (Lifetime Eligibility Used). The Federal Pell Grant is awarded at 100% of eligibility for 12+ credit hours and is prorated for any enrollment of less than 12+ credit hours. Students do NOT have to be full-time to receive the Federal Pell Grant. Awards will be prorated based on enrollment status.

**State Aid:**
Students enrolled for less than six (6) credit hours are NOT eligible to receive the North Carolina Guarantee Scholarship (Next NC). State aid is awarded by the state for the summer terms if funding is available.

**Enrollment Status for Clock Hour Programs**
BLET–Basic Law Enforcement Training (C55120) and Esthetics Certificate (C55230) are clock hour programs, not credit hour programs. Enrollment status is determined by the number of clock hours completed as the semester progresses. For additional information regarding clock hour programs, contact the Financial Aid Office.

Financial Aid

# Financial Aid Award Process

Students are notified of financial aid award decisions for the academic year once the financial aid file is complete. All notifications will be emailed and available on Self-Service unless the student has opted in to receiving paper notifications. To ensure prompt processing of the financial aid application, students must complete the FAFSA early and turn in all required paperwork to the CCCC Financial Aid Office via eforms by notated priority dates available on the Financial Aid page each semester.

Financial Aid

# Financial Aid Satisfactory Academic Progress

In accordance with federal and state regulations, CCCC's Financial Aid Office is required to evaluate a student's satisfactory academic progress at the end of each term (fall, spring, summer), to determine financial aid eligibility for the following term. Satisfactory academic progress evaluations will include all periods of enrollment whether students received or did not receive financial aid for periods of enrollment and include credit hours earned at other institutions and transferred into the student's program of study at CCCC.

In order to be eligible for federal, state, and institutional aid, students must meet both quantitative (time-based) and qualitative (grade-based) standards.

## Grade-based Standard (GPA)

Grade Point: Maintain a minimum cumulative grade point average (GPA) of 2.0.

## Time-based Standard (PACE)

Completion Rate: Complete 67% percent of the total cumulative credit hours attempted. For example, if a student has attempted 100 credits, the student must complete 67 credits to meet the completion rate requirement.

## Maximum Timeframe:

Complete the requirements for an eligible program of study within a timeframe not to exceed 150% of the published program length. For example, if an academic program length is 60 credit hours, the maximum credit hours eligible for financial aid is 90 (60 * 150% = 90). Students may only receive financial aid for two Associate programs at CCCC. Students who have completed one degree (certificate, diploma, or associate) will be placed on Maximum Time Frame and be required to appeal for another program. CCCC Financial Aid will only pay for two Associate Degrees. Once you have completed/graduated with two Associate Degrees your financial aid eligibility will be terminated.

Note: Developmental coursework will be included in the time-based standard and is limited to 30 credit hours.

## Financial Aid Treatment of Selected Grades

**Withdrawals/Drops:** Credit hours in which a student receives a grade of "W" or "WF" are included in the number of attempted hours, but do not count toward successfully completed hours. Excessive withdrawals may affect your ability to meet satisfactory academic progress standards.

**Incompletes:** Credit hours in which a student receives a grade of "I" are included in the number of attempted hours, but do not count toward successfully completed hours. Grades of "I" are treated as an "F", which negatively affects GPA.

**Fails:** Credit hours in which a student receives a grade of "F", "WF", "R" are included in the number of attempted hours, but do not count toward successfully completed hours. In addition, these grades negatively affect GPA. Students with failed grades may have difficulty meeting the satisfactory academic progress standards.

**Audit and Never Attend:** An audit "AU" or never attended "NA" grade is not considered attempted coursework. It is not included in the students' GPA or completion rate evaluation. A student cannot receive financial aid for courses that they audit or never attend.

**Repeat Courses:** Per federal regulations, a student may repeat a previously passed course (grade of "D" or better) one additional time. Repeat courses are included in total attempted earned hours.

**Credit by Exam:** Credit hours in which a student receives a "CE" is included in attempted and completed hours for the time-based standards of completion rate and maximum time frame. A student cannot receive financial aid for a "CE" credit.

**Transfer Credit:** All hours transferred and accepted from other institutions are included in the number of hours attempted and completed. In addition, a student's maximum time to receive financial aid will be reduced by the equivalent transfer of credit hours towards the degree.

## Eligibility Status

**Satisfactory:** Students who meet the minimum requirements (cumulative 2.0 GPA, 67% completion rate, and have not reached 150% maximum time frame for enrolled program of study) of satisfactory academic progress standards are placed on this status.

**Warning:** Students who do not meet the minimum requirements (cumulative 2.0 GPA and 67% completion rate) after an official evaluation at the end of a semester will be placed on warning for the following semester. Students may continue to receive financial aid during the warning period.

**Suspension:** Students on warning status who fail to meet the minimum requirements (cumulative 2.0 GPA and 67% completion rate) or have not met the minimum requirements for two consecutive terms will no longer be eligible for financial aid.

**Maximum Time Frame:** Students who have reached the maximum credit hours allowed for the program of study will be placed on this status. Attempted credits from all enrollment periods at the college plus all applicable transfer credits are counted; whether the student received financial aid for those terms is of no consequence.

**Probation:** Students who have successfully appealed financial aid suspension are placed in probation status. Students in probation status are eligible to receive financial aid for one (1) semester, after which they must be in satisfactory status or meeting the requirements of satisfactory academic progress terms and conditions.

**Termination:** Students on probation status who do not adhere to the success plan that they were given will be placed on Financial Aid Termination. Students who have been terminated are no longer eligible for financial aid until the minimum satisfactory academic progress standards are met.

## Appeals/Regaining Eligibility for Financial Aid

Students who fail to meet the standards of the satisfactory academic progress policy will become ineligible for financial aid immediately. Students with documented extenuating circumstances beyond their control may submit an appeal to the Financial Aid Office for review. If the appeal is approved, financial aid eligibility will be reinstated on a probationary status.

Students may also regain financial aid eligibility if they meet the minimum requirements of CCCC's Satisfactory Academic Progress Policy. Students may achieve good standing by enrolling for classes at their own expense.

## SAP Evaluations and Notifications of Eligibility Status

Returning students are evaluated on a continuous basis from the first enrollment at CCCC unless a mitigating circumstance is considered. Returning students who were previously enrolled under an academic progress policy other than the current satisfactory academic progress policy will be required to meet the standards of the current policy at the end of the returning semester.

The Financial Aid Office will send correspondence of eligibility status to students receiving federal and/or state aid when SAP is evaluated at the end of the semester.

## Return of Title IV/State Funds Policy

Students who are receiving financial aid and withdraw/drop from all classes prior to completing more than 60 percent of the semester will have their eligibility for financial aid recalculated and may be required to repay all or a portion of any federal and/or state financial aid funds received for that semester. Students are responsible for paying any debts to Central Carolina Community College. A "hold" will be placed on the student's record until all charges are paid in full.

# Academic Policies & Procedures




This section outlines the key academic standards and expectations that guide your progress at Central Carolina Community College. From grading and course registration to credit transfer, withdrawals, and graduation requirements, you'll find the policies and procedures that support your academic journey.

Academic Policies & Procedures

## Orientation

All new students are expected to participate in an orientation process that is intentionally planned and guided by Onboarding and Advising. CCCC's orientation model consists of (1) in-person and virtual orientation sessions that will help students make an initial connection to the campus, faculty and staff, students, services, and policies; and (2) ACA "first-year experience" courses designed with a common core curriculum that help to introduce students to more intensive academic and college-related concepts to encourage persistence and college/career success. Students are expected to enroll in the required ACA course during one of their first two terms of enrollment. Students who do not enroll or successfully complete the required ACA course in their first term will be expected to take it in the next term.

# ACA Course Waiver Guidelines

The following students may be waived from the ACA requirement by an academic dean but may still need to fulfill the one credit hour on their program of study:

Individuals who have earned a college degree from a regionally accredited institution or individuals who have completed and received credit for at least 18 hours credit for prior academic work and/or who demonstrate competency and skills that will facilitate the successful transfer into and persistence in the chosen degree program at Central Carolina Community College will qualify for a waiver for the ACA requirement. At the dean's discretion, transfer students with 12 hours of earned credit will also be considered if earned as a fulltime student; or

Those who have completed an ACA course at the 100-level or above from Central Carolina Community College or another North Carolina community college, or who have received prior credit for an equivalent course.

Students who receive the proper signatures on the Credit by Experience form will then be referred to Student Advising and Success to complete an online ACA tutorial that covers CCCC success.

## Academic Advisors

The role of the academic advisor is to serve as the primary contact with the student for their academic activities while enrolled at CCCC, to provide referrals to college resources, and to assist in overall academic and career planning.

The student is expected to confer periodically with their advisor (at least twice each semester) regarding academic standing, early registration, or any other areas of concern. Students are required to meet with their advisor to approve their courses for registration for the subsequent semester.

More information about advising at CCCC, including the roles of advisors and how they work with students, can be found on the college's advising page.

# Registration

All curriculum students must register prior to or at the beginning of each term during the time specified for that purpose on the college calendar. Each semester, returning students are encouraged to register early for the subsequent semester. Students are expected to pay tuition charges in full by the designated pay date. Failure to do so results in the student losing their schedule.

# Course Load

Students enrolled for 12 or more semester credit hours during the fall and spring semesters are designated as full-time students.

No additional tuition is charged for credit hours over and above 16. Normally, the course load range is from 16-19 semester credit hours. Students may take no more than 19 semester credit hours during fall or spring semester without special permission of their advisor and the chief academic officer or vice president of student services.

Students enrolled for six or more semester credit hours during the summer semester are designated as full-time students. Pell recipients must enroll in at least 12 semester credit hours to receive a full Pell award for a summer semester. Students may take no more than 12 semester credit hours during the summer semester without special permission of their advisor and the vice president student services or chief academic officer. Students are not permitted to register for more than 14 semester credit hours during the summer semester.

Students experiencing academic difficulty will be advised to take a reduced course load.

# Definition of a Credit Hour

According to CCCC policy, the college follows the requirements of the North Carolina State Board of Community Colleges in awarding curriculum credit hours for instruction. The amount of credit hours awarded for each course is determined by the North Carolina Community College System and listed in the Combined Course Library available on the North Carolina Community College System webpage.

Following is the NCCCS convention for awarding credit hours from course hours:

- For every 16 classroom hours, one semester (credit) hour is awarded.
- For every 32 hours of "experiential laboratory work," one semester (credit) hour is awarded.
- For every 48 hours of "faculty directed laboratory work" one semester (credit) hour is awarded.
- For every 48 clinical hours, one semester (credit) hour is awarded.
- For every 160 work experience hours, one semester (credit) hour is awarded.

All programs of study meet the NCCCS requirement set forth in statewide curriculum standards. Following are the number of credit hours required for associate degree, diploma, and certificate programs:

| | AAS | DIPLOMA | CERTIFICATE |
|---|---|---|---|
| Minimum General Education Hours | 15 | 6 | 0 |
| Minimum Major Hours | 49 | 30 | 12 |
| Other Required Hours | 0-7 | 0-4 | 0-1 |
| Total Semester Hours Credit (SHC) | 64-76 | 36-48 | 12-18 |

**Any CCCC credential that contains a total number of credit hours that falls outside of the defined range are exceptions approved by the NCCCS and show accurately in the required state curriculum standards.*

Academic Policies & Procedures

# Transfer to and from CCCC

Central Carolina Community College offers Associate in Arts, Associate in Science, Associate in Engineering, Associate in Arts in Teacher Preparation, Associate in Science in Teacher Preparation, and Associate in Applied Science degrees, as well as diplomas and certificates.

## Transfer to Four-Year Institutions

In accordance with the Comprehensive Articulation Agreement and Transfer Assured Admissions Policy between the North Carolina Community College System and the University of North Carolina (UNC) System, CCCC graduates who complete an Associate in Arts or Associate in Science degree and meet all other requirements are assured admission into one of the UNC system's 16 public universities. Students who complete the Associate in Engineering and its corresponding requirements are not guaranteed admission into a public or private university but will meet the core requirements for transfer to the state's public and private universities with undergraduate engineering

programs. The Associate in Arts in Teacher Preparation degree and the Associate in Science in Teacher Preparation degree prepare students for articulated transfer to designated senior institutions. CCCC also has transfer agreements with several colleges and universities outside the UNC System. Check with your academic advisor for more information on transfer credits.

## Enhanced Transfer Partnerships

Central Carolina students have a number of transfer options and can transfer credits to in-state public and private colleges and universities as well as out of state institutions. Students are advised to work with their advisor to explore the transferability of credits and credentials. CCCC has worked with a number of institutions, known as Enhanced Transfer Partners, which provide extra incentives or guarantees related to transfer.

For more information, contact the Associate Dean of Academic Advising and Transfer or visit Transfer Partnerships.

## Associate in Applied Science Degree (AAS) Transfer

Although the Associate in Applied Science degree is designed for workforce training, many colleges and universities will accept transfer credit from CCCC Associate in Applied Science degree students who wish to pursue a four-year degree. Credit granted may range from partial to full credit toward a bachelor's degree program. AAS students wanting to transfer are encouraged to meet with a CCCC college transfer advisor and with the appropriate admissions officer at the four-year college to discuss transfer credit.

### Resident Transfer Credit

When a student transfers from one curriculum to another within the college, all courses applicable to the new program for which the student has earned credit will transfer as resident credit depending upon the curriculum guidelines and academic policies in effect at the time of transfer. Some courses may be ineligible for transfer based on time limitations set by specific curriculum programs.

### Transfer Credit from Another Institution

CCCC accepts transfer credit from regionally accredited institutions under the following rules:

- Higher education institutions (colleges) transfer credits may be accepted only from regionally accredited institutions.
- A course grade of "C-" or better is required for all transfer credit.
- Students must request official transcripts to be sent to the Student Records and Registrar's Office for evaluation.
- When deemed necessary, students must provide course descriptions and/or course syllabi if they are needed to determine credit eligibility.
- Some courses may be ineligible for transfer credit based on time limitations as set by specific curriculum programs.

Credit will be granted on a course-by-course basis for courses closely paralleling those offered at the college and must meet the credit hours of the CCCC course for which transfer credit is granted. Transferred credit will not be calculated in the grade point average.

Academic Policies & Procedures

# Alternative Credit / Credit for Prior Learning

The Student Learning and Student Services divisions collaboratively ensure appropriate procedures and guidelines exist for granting and recording the amount and level of credit for each course.

### Amount of Alternative Credit Allowed

- At least 1/4 of credit for a certificate, diploma, or associate degree required for graduation must be earned at Central Carolina Community College.
- No more than 20% of credit for a certificate, diploma, or associate degree required for graduation may be earned through credit by experience.
- A student may earn alternative credit in the following ways:

### Advanced Placement (AP), CLEP, DANTES

Students may request credit for subjects tested under advanced placement exams such as AP, CLEP, and DANTES. Subjects must be applicable to the student's current curriculum program requirements and test scores must meet American Council on Education (ACE) recommendations. Such credit must be supported by official test score reports. The following rules apply:

- Students must request that official score reports be sent to the CCCC Student Records and Registrar's Office for evaluation.
- Credit will be granted only for scores earned within the last ten (10) years unless approved by the chief academic officer.
- Credit will be granted on a course-by-course basis for courses closely paralleling those offered at the college and must meet the credit hours of the CCCC course for which transfer credit is granted.
- Such credit will not be calculated in the grade point average.
- An exam score of 3 or better is required to receive credit for an AP course.
- Recommended ACE cut-off scores will be used for CLEP and DANTES.
- Advanced Placement Credit will not be calculated into the GPA.

### Credit by Examination

Students with prior proficiency in a course due to previous educational or work experience may wish to apply for credit for prior learning. The college helps to facilitate this goal by allowing challenge exam requests to award credit by exam. This option is available for selected courses as determined by the department chair/program director. A proficiency demonstration may be a written exam, oral exam, shop exercise, lab exercise, or combination.

To receive credit by examination, the student must complete the following:

- Complete the Challenge Exam Request form prior to the start of the semester/session or within the first few days (fourth day of the 16-week session; third day the 12-week session; second day of an 8-week session).
- Show evidence of preparedness for a proficiency demonstration (e.g., high achievement in secondary school, military service, and/or work experience) that must be submitted to and approved by the department chair/program director or their delegate.

- Take the proficiency exam administered by the instructor no later than the fourth day of the 16-week session; no later than the third day of the 12-week session; no later than the second day of an 8-week session for the term in which the Registrar will transcribe the course. This allows the student to register for the subsequent class following in sequence.
- Earn a grade of 85% or better on the proficiency exam.

College faculty and staff must complete the following:

- Department chairs will approve or deny requests in a timeframe consistent with procedure and assign an instructor to administer the exam.
- The assigned instructor records the challenge exam score on the Challenge Exam Request form and submits the form to the Records Office to award credit.
- The Records Office enters the student's proficiency exam score under 'Other Tests' in the Student Information System and assigns a grade of "CE" (Credit by Examination).

Proficiency demonstrations may:

- only be attempted once.
- only be attempted for the initial enrollment in the course.
- not be attempted for courses being audited.
- not be attempted for courses where the student has previously received a grade of A, B, C, D, F, W, or WF.

Credit granted through a proficiency exam:

- Will not be calculated in the grade point average.
- May not be transferred to other institutions.

## Articulated CTE High School to Community College Credit

Students may request articulated credit based on CTE courses completed from a NC public high school if they meet the following criteria:

- To receive articulated credit, students must enroll at the community college within two years of their high school graduation date.
- Students must have earned a final grade of B or higher in high school CTE courses.
- Students must have earned a score of 93 or higher on the standardized CTE post-assessment.
- Students will complete a HS to CC Articulated Credit form available on the website.
- The registrar will verify high school graduation date, CTE course taken, course grade and post-assessment grade.
- Awarded credit will be issued tech prep non-course credit with a grade of CE which will not be included in GPA calculations.

## Credit by Experience

Students may request credit for work experience, skills, or professional licensure or certification that directly correlate with competencies required in a specific course. The following procedures apply:

- Requests for credit by experience must be properly made and acted upon prior to the 10% point of the class and must be made in writing on the Request for Credit by Experience form.
- Credit by experience may not be granted for work based learning courses.
- The department chairperson/program director or lead instructor will guide the student in determining the appropriate documentation necessary to evaluate the request. Documentation required will vary depending upon the field of study.
- For guidance, the following are examples of the appropriate documentation: official work history with job responsibilities and proficiency ratings verified by supervisors and human resource officers within the company; a completed thesis verified by an official transcript could serve as verification that a student should receive credit for a technical writing course; electronically recorded presentations (taped presentations could be evaluated to determine credit by experience for an oral communications class); and brochures announcing a pottery exhibit and displaying the creations of the student could be used for an art class.
- Experiences, which may require a demonstration of one's ability, must be approved by the student's curriculum department chairperson/program director or lead instructor, the subject area department chairperson/program director, and the chief academic officer.
- Experiences must be officially documented per the college's request.
- Veterans may apply credit for training received under the armed forces college training programs and some specialized and technical training completed under the auspices of the armed forces. Appropriate documentation must be provided.
- The approved credit recommendation should be submitted to the Records and Registrar's Office.
- The registrar will record a grade of "EL" on the transcript with credit hours; however, no quality points will be assigned.
- Documentation shall be kept on file for five (5) years in the Registrar's Office.
- Credit granted for experience will not be calculated in the grade point average.
- Financial aid is not available for credit by experience.
- Credit by experience will not be entered on a student's record until after the census date of the student's first enrolled curriculum course with the college.

## Internal Articulated Credit

Students may be granted articulated curriculum credit for non-credit courses that have an approved internal articulation agreement on file in the Registrar's Office.



# Independent Study

Under extenuating circumstances, a student may enroll in a course through independent study, adhering to the following steps for an independent study course:

1. The student must complete the Independent Study form.
2. Approval of the instructor of record, the department chairperson/program director, and the appropriate curriculum dean, demonstrated by their signature on the Independent Study Form, is required.
3. The student enrolling in the independent study course must also complete regular registration procedures.
4. The student and instructor of record must meet for a minimum of ten (10) contact hours for any independent study course.
5. Course requirements must be completed in the same term as registered.

Faculty serving as instructor of record for one or more Independent Study courses are subject to the following:

- Must meet with student for a minimum of ten (10) contact hours during the semester
    - Contact for independent study purposes is defined as synchronous interaction between the student(s) and the instructor of record.
    - Examples of approved methods of contact may include, but are not limited to, face-to-face meetings, phone calls, shop/lab time, and the use of interactive communication technology, such as FaceTime, Zoom, and/or Video Conferencing.
- Must meet with the student at least once before the ten percent point.
- Must record and document all contact hours met for attendance purposes.
- Must follow all college policies related to student attendance, communication, and grading.
- Must submit grades to the Registrar's office by the due date.
- Instructor compensation for Independent Study Courses is supplemented in the form of a stipend.

Independent Study courses are not considered as part of the course load for the instructor of record.

Academic Policies & Procedures

# Course Substitution

Central Carolina Community College may allow courses to be substituted in a curriculum for a student only under extenuating circumstances and only if the substitution is within the North Carolina Community College System's curriculum standards.

The course(s) used as a substitute must have credit hours that are at least equal to the number of credit hours of the original course.

- The substitute course(s) must have relevance to the curriculum and to the course for which the substitution is made, unless the course is being used as a free elective.
- Required core courses as outlined in North Carolina Community College System curriculum standards may not be substituted without review and approval of the chief academic officer.
- Requests to substitute courses that were completed at institutions other than a North Carolina community college must be accompanied by a full course description and accreditation status at the time the course was completed from the institution from which the course is being transferred. If necessary, the department chair/program director may request a course syllabus if the course description is not detailed enough. It is the responsibility of the student to provide all requested documentation.
- Course substitutions must be submitted and processed prior to the census date of the substituted course.
- The Registrar's Office requires documentation in order to process the substitution in the student information system.
- The Course Substitution form must be used.

Academic Policies & Procedures

# Course Policies

## Time Provisions for Completing a Curriculum Program

The catalog of record is the catalog that is current at the time a student enrolls at CCCC in a program of study. If a student changes the program of study, then the catalog of record becomes the catalog that is current at the time of that change of program. To graduate under a program of study, a student must meet the requirements of the catalog of record or any catalog in effect within the next five years as long as the student has been continuously enrolled.

If a student breaks enrollment for one academic year (fall and spring consecutively, or spring and fall consecutively), the catalog of record will become the catalog that is current at the time of re-entry. From that point of reentry, the rule of continuous enrollment will apply. The assigned faculty advisor and/or registrar have/has the authority to choose a catalog within a five-year period of continuous enrollment that best suits the student's needs for the particular program of study at the time of graduation.

Exceptions to this policy must be approved by the chief academic officer or designee. External agencies, accrediting agencies, and the North Carolina Community College System may make changes which impact program requirements.

## Auditing Courses

A student who desires to take a course without credit may choose to audit the course by completing the Audit Declaration form available through their faculty advisor on the college intranet; having it signed by the instructor, department chair, and dean; turning it in at registration; and paying full tuition. An audit student cannot change the course from audit to credit or from credit to audit after the last day to register or drop/add a course. A grade of "AU" will be assigned to the student upon completion of the course.

Auditing a course is subject to permission of the instructor and is contingent upon space available in the class.

The registrar will ensure that all faculty receive a copy of the completed Audit Declaration Form in order to know who is auditing their classes.

Financial aid is not available for course audit.

A special exclusion exists for senior citizens who wish to audit a class. Individuals 65 years and older may elect to audit a course if space allows. No tuition will be charged to the individual although the student will be responsible for any applicable fees. A grade of SR will be assigned to the student at the time of enrollment. No credits attempted or completed will be reflected on the student's transcript and no quality points will be awarded. The student must provide a photo ID documenting the age requirement or a birth certificate and complete the auditing form. This exclusion cannot be utilized until the add registration period has ended to insure space availability for credit-seeking students.

## Curriculum Course Repetition

A student may repeat a course to eliminate a failing grade, to attempt to earn a higher grade, or to earn credit for which transfer credit has not been granted. All course grades will be recorded on the transcript; however, the highest grade will be used for computing total credit hours attempted and passed, total grade points, and grade point averages. No course may be counted more than once for graduation. No course, except developmental courses, may be repeated more than twice. An exception may be granted for courses that receive a "W" grade, which may be repeated more than twice with approval of the dean.

Certain regulations may prohibit veterans and other financial aid recipients from receiving financial aid for repeating courses previously passed. It is the student's responsibility to determine status in regard to financial aid.

Financial aid is available to repeat a "passed" class (grade of "D" or better) one additional time for a higher grade. Students can receive financial aid to repeat a failed class. However, students must meet the minimum requirements of Satisfactory Academic Progress standards at the end of each semester. Financial aid does not do grade replacements.

## Academic Forgiveness

Students may request academic forgiveness for grades of D or lower guided by the following conditions:

1. Students who (a) were not enrolled in college curriculum courses for 36 consecutive months (three years) or longer, and (b) have been re-admitted to the college, seeking acceptance in a limited enrollment program and complete at least 12 credit hours of coursework at the 100-level or above with a minimum quality point average of 2.0.
2. Students meeting the criteria for 1a and 1b should visit with their Education Navigator to review the Academic Forgiveness guidelines/steps and will be connected to the Dean of Student Onboarding and Success and the Dean of Health Sciences and Human Services for final approval towards academic forgiveness.

If the student is granted academic forgiveness, the following conditions apply:

1. Previous grades of D, F, and WF will not be used when calculating the cumulative GPA. Recalculated grades must not have been counted under a previously-granted certificate, diploma, or degree from Central Carolina Community College.
2. The student's full academic record from Central Carolina Community College will still be recorded on all subsequent transcripts.
3. Academic forgiveness is only available once for each student.
4. Academic forgiveness is used for calculation of the cumulative academic GPA and will not be changed on the student's transcript.
5. Due to federal regulations, the Financial Aid Office takes all attempted courses into account from a student's transcript when determining financial aid eligibility.
6. The Vice President of Student Services and Chief Academic Officer must approve any exceptions to this policy on a case-by-case basis.

## Removal of Incomplete

Instructors may assign in accordance with NCCCS guidelines a grade of "I" (Incomplete) to any student who needs additional time to complete course requirements.

For each grade of "I," the instructor must fill out a Requirements to Remove Incomplete form indicating what the student must do to earn a final grade, attach a copy to the grade report submitted to the registrar, and send a copy to the student and the appropriate dean. The student must take the initiative to remove the Incomplete by the midterm date of the next semester (fall, spring, or summer) as specified on the college calendar.

Unusual and extenuating circumstances may be cause for allowing extended time to remove an Incomplete. These circumstances must be determined by the instructor and student with notification of the extended time to the registrar. A student cannot graduate with an "I" on their record if the course is required for graduation.

If the student fails to complete requirements necessary to remove the Incomplete when prescribed and/or the instructor fails to turn in a final grade on an Instructor's Grade Change report by the midterm date of the next (fall, spring, or summer) semester as specified in the college calendar, a grade of F will be assigned by the registrar and computed in the student's cumulative grade point average.

Academic Policies & Procedures

# Curriculum Course Repetition Policy

A student may repeat a course to eliminate a failing grade, to attempt to earn a higher grade, or to earn credit if transfer credit has not been granted. All course grades will be recorded on the transcript; however, the highest grade will be used for computing total credit hours attempted and passed, total grade points, and grade point averages. All grades will be counted for calculations of satisfactory academic progress (SAP) for financial aid. No course may be counted more than once for graduation. No course-may be attempted a third time without department chair approval. In exceptional circumstances, a course may be repeated a fourth time with academic dean approval. The fourth attempt at CCCC is the student's final attempt. Courses transferred into CCCC do not count toward the number of attempts allowed, but may be considered in financial aid eligibility. Courses the student drops prior to or during the add/drop period do not count toward the number of attempts allowed. CCCC will follow all state and federal requirements and policies related to course repetition.

**Procedure**

Students who wish to attempt a course for the third time shall complete the form to request the third attempt and schedule an appointment with the department chair to discuss challenges and plan for successful completion of the course. The department chair must approve the request for registration to proceed. In exceptional circumstances, if students request to take a course a fourth time, they must complete the form to request the fourth attempt and schedule an appointment with the academic dean. The academic dean must approve the request for registration to proceed. No student may attempt a course more than four times at CCCC. Certain regulations may prohibit veterans and other financial aid recipients from receiving financial aid for repeating courses previously passed. It is the student's responsibility to determine status in regard to financial aid.

Academic Policies & Procedures

# Prerequisites/Corequisites

Central Carolina Community College and each student are responsible for ensuring that prerequisite (course taken prior to another course) and corequisite (course taken at the same time or prior to another course) requirements have been satisfied.

Prerequisites and corequisites serve as safeguards to successful course and program completion in that they ensure proper knowledge and background for higher-level courses. In the case of corequisites, the goal is to ensure a proper educational experience when two courses depend upon one another for coherence and knowledge application.

In rare cases, prerequisites or corequisites may be waived using the appropriate form upon review and recommendation by the department chair to the dean or provost and in consultation with the chief academic officer. Permissible reasons for waiver of local prerequisites are limited to the following:

- Grade of at least "C" in a course judged of similar or higher-level content to that of either the prerequisite/corequisite or the requested course.
- Demonstrated competency in the content of the prerequisite/corequisite obtained through professional application. In this case, the student must request credit by experience.

- Life experiences that are deemed equivalent to or that supersede the prerequisite or corequisite; a formal review of course level outcomes would occur and be maintained in the student's records.
- Transfer in of a course that has a prerequisite or corequisite (for example: a student transferring in MAT-271 with the prerequisite of MAT-172 would not have to take MAT-172).
- Satisfactory completion of proficiency exams administered by CCCC (when such exams are available).
- Enrollment in another course deemed suitable to satisfy the corequisite.
- Students engaged in a job experience during the duration of the course that would provide a similar purpose of the corequisite.
- An associate or higher level degree when enrolling in beginning college level courses (e.g. ENG 111; PSY 150) or other reasons as approved by the academic dean and chief academic officer.
- For visiting students, written documentation from their college/university to enroll in a specified course that has a prerequisite.



# Uniform Grading System

The college operates on a uniform grade point system in curriculum areas. All subjects must be completed satisfactorily for academic credit. This grade system is followed for all subjects in curriculum areas except in cases an alternate grading scale is prescribed by an external regulatory agency.

CCCC computes curriculum GPA using the quality point system explained below. All subjects must be completed with satisfactory grades if the student is to be awarded a certificate of completion, diploma, or degree. This grade system is followed for all subjects in curriculum areas. Students enrolled in a course that includes integrated and/or corequisite lecture and lab components will earn a single course grade. A cumulative grade point average is maintained which includes all courses taken. If a course is retaken, only the highest grade will be averaged in the cumulative and program grade point average; however, both grades will be recorded on the transcript.

| LETTER GRADE | MEANING | QUALITY POINTS (PER CREDIT HR.) |
|---|---|---|
| A (90-100) | Excellent | 4 |
| B (80-89) | Above Average | 3 |
| C (70-79) | Average | 2 |
| D (60-69) | Below Average | 1 |
| F (59 & under) | Failure | 0 |
| I | Incomplete | 0 |
| W | Withdrew | 0 |
| WF | Withdrawal/Failing | 0 |
| AU | Audit | 0 |
| P/F | Pass/Fail | 0 |
| CE | Credit by Exam | 0 |
| * (Grade) | Indicates grade not applicable | 0 |
| EL | Learning by Experience | 0 |
| TR | Transfer Credit | 0 |
| SR | Senior Audit | 0 |

## How to Compute the Grade Point Average (GPA)

Academic quality must be achieved in order to graduate from any program at CCCC. The standard for students' work is determined by the quality point system. Under this system, a letter grade is assigned a certain number of quality points (QPs) per credit hour; i.e., an "A" is given four QPs; a "B", three QPs; a "C", two QPs; a "D", one QP; and "F", no QPs. Quality points are computed by multiplying the number of credit hours per course by the value of the grade earned. The grade point average (GPA) is then computed by dividing the total number of quality points by the total number of credit hours attempted

## Example of Computing Grade Point Average

Thirty-eight (38) QPs divided by seventeen (17) credit hours equals 2.235 GPA. ***NOTE:*** *Grade point averages are not rounded up or down for graduation or honor awards.*

| COURSE EARNED | CREDIT HRS. | GRADE | CALCULATION | QPS |
|---|---|---|---|---|
| ENG 111 | 3 | C (2) | 3x2= | 6 |
| BIO 163 | 5 | A (4) | 5x4= | 20 |
| PSY 150 | 3 | B (3) | 3x3= | 9 |
| SOC 210 | 3 | D (1) | 3x1= | 3 |
| BUS 110 | 3 | F (0) | 3x0= | 0 |

Note: Developmental course grades of courses below 100 level are not calculated into the academic GPA. However, all grades are calculated into the Financial Aid GPA to determine eligibility for financial aid.

# General Academic Standards

If a student does not meet minimum placement criteria to take the mathematics and English composition course of their choice, they must enroll in the appropriate non-credit developmental course(s) to learn the skills necessary to meet the placement scores for the general education course desired.

Students who do not earn a 2.0 GPA for any given term will be held to the Academic Sanctions policy.

Students will not be allowed to repeat any curriculum course more than twice.

Note: for the Associate in Arts, Associate in Science, Associate in Engineering, and all health science programs except for nursing, coursework must be completed with a grade of C or higher. All NUR prefix courses must be completed with a grade of B or higher

Academic Policies & Procedures

# Academic Awards

## President's/Dean's List Eligibility

A student will be announced as a President's List student if they are enrolled full-time in a curriculum program (minimum of 12 credit hours), receive all grades of "A" (4.0 GPA), and have no grades of "I" during the term. The required GPA will be determined by computing grades earned only in credit courses.

A student will be announced as a Dean's List student if they are enrolled full-time in a curriculum program, receive a grade point average of 3.50 with no grades lower than a "C," and have no grades of "I" during the term.

A student graduating with an average of 3.5 or higher in major program courses will be announced as an Honor Graduate.

## Highest Academic Award

The Highest Academic Award in four categories: AA, AS/AE, AAS and Diploma will be presented to participating graduates at the annual graduation ceremony who have the highest academic average. These graduates must have completed 75% of their course work and their last term of study at the college. Only graduates with a minimum grade point average of 3.5 will be eligible to receive this award.

Academic Policies & Procedures

# Academic Sanctions

**Academic Warning:**
Students who do not earn a 2.0 GPA for any given semester will be placed on academic warning and will be notified of their academic status at the end of each term. Students with an academic warning status who are seeking a degree, diploma, or certificate will be required to enroll in and successfully complete a zero-level ACA course. Additionally, students will be required to meet with their Education Navigator.

- During the Education Navigator meeting, students will complete a self-assessment to determine their needs. If a student fails to meet with their Education Navigator, a hold will be placed on their account to trigger a meeting before they are allowed to register for the next semester.

**Extended Academic Warning:**
Students who do not earn a 2.0 GPA for a second consecutive semester will have their academic warning extended. Students will be notified of their academic status at the end of each term. Students with an extended academic warning status who are seeking a degree, diploma, or certificate will be required to enroll in and successfully complete a zero-level ACA course (if not already successfully completed in a previous semester). A reduced course load may be required. Students are required to meet with their Education Navigator at the beginning and end of the semester.

- Credit Hour Cap: The allowable credit hours will be tailored to each student's academic plan (in accordance with the Department Chair for their program), considering factors such as retaking courses, course sequencing, and program specifics. This determination will be made during the meeting with the Education Navigator.
- Bi-Weekly Check-In Meetings: Students must meet bi-weekly with their Education Navigator to review progress, reassess the self-assessment previously completed, and plan for any needed resources, such as tutoring, academic assistance, or other support services.
- Required Engagement: Students must engage with campus partners such as the Academic Assistance Center, Library Resources, faculty advisors, etc.

**Exceptions:**

- **Academic Warning Exception 1:** Students with an academic warning status who maintain a cumulative GPA of 3.0 or higher will not be required to enroll in a zero level ACA course. A reduced course load is recommended.
- **Academic Warning Exception 2:** Students with an academic warning status who have enrolled in and successfully completed a zero level ACA course during a previous term will not be required to repeat it. Students who are placed on academic warning or extended academic warning for subsequent terms will only be permitted to enroll in a maximum of 12 credit hours (12 credit hours for a 16-week term, 9 credit hours for a 12-week term, and 6 credit hours for an 8-week term) during the next term of enrollment. Students can enroll in additional credit hours upon obtaining a 2.0 term GPA during the probation term. Students in limited enrollment programs who are placed on academic warning will be subject to the academic standards and progression policies of their respective program.

**Academic Suspension:**
Students who continue to achieve below a 2.0 cumulative and semester GPA after two consecutive semesters, as noted on the official transcript, will be suspended for one semester unless they have had a break in attendance for one calendar year or longer. A student placed on academic suspension will be suspended from all coursework and college activities for one term, with the exception of enrollment in a zero-level ACA course (if not already successfully completed in previous semesters). Academic suspension will be posted to the student's official transcript for that term.

A student may be readmitted after one term of suspension by meeting with their Education Navigator and completing their Success Plan. The Success Plan should also be reviewed and approved by the Academic Advisor.

Upon return the student is required to meet with an Education Navigator at least 3 times to review the Success Plan, determine needs throughout the semester, and review their academic plan and progress towards completion.

**Exceptions:**

- **Academic Suspension Exception:** If a student applies to change curriculum programs after two terms with a GPA below 2.0, the suspension may be extended for one term. During this suspension extension term, the student will be required to enroll in and successfully complete a zero-level ACA course. This extension of suspension must be approved by the department chairperson/program director of the new curriculum and by the Vice President of Student Services or designee. Failure to obtain at least a 2.0 GPA during the subsequent term will result in academic suspension for one term.

Per NCCCS guidelines, Career and College Promise (CCP) students, including Cooperative Innovative High School students (i.e. early college) will be held to the same standard set by the college for traditional students.

Academic Policies & Procedures

# General Education Competencies

The college is committed to teaching and learning excellence. Every degree program includes a minimum of fifteen semester hours credit of general education as prescribed by the North Carolina Community College System Curriculum Standards, and CCCC believes that every degree student should successfully master general education competencies regardless of the degree discipline.

The general education competencies developed by the college represent the academic proficiencies believed necessary for graduates to be successful and productive employees as well as successful community citizens.

In support of the college mission, CCCC students will be able to demonstrate:

1. Analyze complex problems to propose evidence-based solutions
2. Interpret numerical data using real life and occupational-related problems
3. Deliver effective oral communication for a professional setting
4. Create and submit professional and/or academic work using productivity software

## General Academic Standards

If a student does not meet minimum placement criteria to take the mathematics and English composition course of their choice, they must enroll in the appropriate non-credit developmental course(s) to learn the skills necessary to meet the placement scores for the general education course desired.

Students who do not earn a 2.0 GPA for any given term will be held to the Academic Sanctions policy.

Students will not be allowed to repeat any curriculum course more than twice.

Note: for the Associate in Arts, Associate in Science, Associate in Engineering, and all health science programs except for nursing, coursework must be completed with a grade of C or higher. All NUR prefix courses must be completed with a grade of B or higher

Academic Policies & Procedures

# Attendance

Central Carolina Community College values a philosophy that supports the attainment of education, skills, and competencies integrated with a strong awareness of a workplace ethic of responsibility and commitment to excellence. Regular attendance is required and demonstrates a commitment to educational achievement and good workplace ethics.

Procedures guiding student attendance in curriculum classes are as follows:

- All work missed during absences must be made up to the satisfaction of the instructor, and failure to make up work may adversely affect the student's final grade.
- Students may be withdrawn by the instructor for missing more than 20% of class meetings before the last day to drop a course will receive a grade of "W."
- The college establishes attendance requirements and instructors maintain accurate records of membership/attendance in accordance with state, federal, and third-party regulatory guidelines.
- Central Carolina Community College authorizes two absences from classes each academic year for religious observances required by the faith of a student. For the purposes of this policy, an academic year begins on the first day of fall classes in August and ends on the last day of summer classes in July each year. Absences due to religious observance are in addition to allowed absences set forth by 80% attendance requirement.
- Students requesting absence from class for religious observance must obtain approval at least two weeks prior to the date of the absence. Students who miss class for religious observance will be granted the opportunity to make up work missed due to the absence.
- Making up absences is at the discretion of the instructor or may be guided by internal policies determined by individual departments or programs when necessary to comply with guidelines prescribed by accrediting or licensing agencies. Allied Health, Barbering, Basic Law Enforcement Training (BLET), Cosmetology, and Esthetics are examples of such programs and courses where external agency requirements may influence attendance guidelines.
- At the discretion of the instructor, a student may be referred to their Education Navigator to address absences in courses. The visit must be documented prior to reentry to the class.
- In all cases, instructors are required to maintain accurate attendance records. Absences due to late registration shall be counted as regular absences. If a student has been in attendance prior to the 10% census date, but has also been absent during that time, the instructor should not initiate a student withdrawal except for students who have never attended class.
- When the instructor decides to withdraw a student, the instructor will notify the student through the student's official college email in a timely manner.
- If a student wishes to appeal an instructor's decision to withdraw them for absences, the student should consult the instructor's immediate supervisor. Further appeals should be made to the next ranking official up to the Chief Academic Officer. The official to whom the appeal is made may reverse the withdrawal. The decision of the Chief Academic Officer is final.
- Students who anticipate an absence should contact their instructor before the class meets. Should this prior notice to the instructor be impossible, the student should expect to explain their absence upon return to class.
- Excessive tardiness will be dealt with in a manner similar to that for absences. Three tardies constitute one (1) absence. Students who are late by 10 minutes or more will be marked absent for that hour of class.

***NOTE:*** *A grade of "W" may adversely affect third-party payments (e.g., financial aid, VA benefits).*

**Disciplinary withdrawals may be appealed through the procedures outlined under Students Rights (Disciplinary Procedures).*

## Distance Education Attendance

Attendance or participation in the online portion of distance education courses is defined as submitting academic work. At the semester start, students are required to complete course-specific academic work by the census date to remain enrolled in the course.

Clicking into a Blackboard site does not qualify as attendance in a distance education course. Students should refer to their course's syllabus for more detailed requirements regarding active participation in their distance education course. Students who do not meet the attendance policy requirement in their distance education course may be withdrawn by the instructor from the course.

# Inclement Weather Policy

When the college determines that weather conditions are severe enough to warrant closing, the information will be made available as soon as possible. Students, staff, and faculty should visit the college website for the most up-to-date inclement weather postings. The chief academic officer or designee maintains a contact list for local news stations and is responsible for facilitating the process to notify the media.

All inclement weather days not made up by an administrative change in the college's calendar will be made up by the instructor utilizing one of the following options: a) using an alternate assignment relevant to course objectives, b) scheduling extra class sessions, c) holding conferences with individual students, or d) extending scheduled class time (requires dean approval). The appropriate form should be submitted to the department chair/program director.

**Types of Announcements**

- CCCC will be closed. Optional staff workday. (No classes will be held, but administrators, faculty, and clerical staff are expected to report for work).
- CCCC will be closed. (This applies to extreme conditions and no one is expected to report for work).
- College will open at announced time (Classes that meet at that time or after will meet).

In the absence of announcements A, B, or C listed above, classes will be held as usual.



# Withdrawals

A student who initiates a withdrawal from a curriculum course should complete an official Withdrawal Request Form with appropriate personnel. An instructor may initiate a student withdrawal in accordance with the college's attendance policy. If after withdrawing, a student has a break in enrollment for one academic year (fall and spring or spring and fall consecutively), then the student will enroll under the provisions of the current catalog at the time of re-entry. Withdrawals follow all state, federal, and third-party requirements.

A student who wishes to withdraw from a curriculum course should consult with their advisor and the course instructor before completing an official Withdrawal Request Form, located on their Success Hub (linked from the CCCC Portal). The last date of attendance (including withdrawal resulting from disciplinary suspension or expulsion) from a course can affect the final grade for that course. The completed form is submitted and reviewed by the students' Faculty Advisor, Instructor(s) of the Course(s) and the Education Navigator and then processed by the Records Office. When a student withdraws from the college, they may apply for readmission at the beginning of the subsequent term for which they are eligible.

A student may withdraw within the first 75% of the course session or semester and receive a "W." After the 75% point as specified in the college calendar, withdrawal from a course results in a final grade of "WF" if a student attended past the 75% date in the class. A grade of "WF" is treated as an "F" and affects the grade point average. While a "W" does not adversely affect the student's GPA, a grade of "W" may adversely affect third-party payments (e.g. financial aid, VA benefits). Students should contact the Financial Aid Office, their Education Navigator, or their academic advisor before deciding to withdraw from one or more courses.

Withdrawal after the 75% point of the course will be designated with a "WF" except in the case of hardship/medical withdrawal from the college. A hardship/medical withdrawal may be requested from the Vice President of Student Services and documented and filed with the registrar before the end of the term. A medical withdrawal is applied to all attempted courses in the semester, not an individual attempted course.

When a student has not attended class for two consecutive weeks, has not contacted the instructor, and has not completed an official withdrawal form, the faculty may complete and submit to the registrar a "student termination" or the online Withdrawal form. The grade assigned to the student on the Withdrawal form will be determined by the last day of attendance; i.e., a "W" if the last day of attendance was on or before the 75% date or a "WF" if the last date of attendance was after the 75% point of the course session.

## Readmission

When a student withdraws from the college, they may apply for readmission at the beginning of the next term in which courses are offered and for which they are eligible.

A student reentering must do so under the provision of the catalog in effect at the time of reentry.

## Disciplinary Withdraws

A student may be suspended from a course for disciplinary reasons at any point during a course. Disciplinary withdrawals may be appealed through the procedures outlined under student rights (disciplinary procedures). If a student wishes to appeal an instructor's decision to withdraw them for absences, the student should follow the grade appeals procedure guided by the form posted on the Student Records and Registrar's Office web page.

## Withdrawing Students from Class Roll

A student will be withdrawn when the student gives notice of withdrawal or has been absent from class for more than two consecutive weeks without making personal contact with the instructor indicating intention to continue in the course. Absence must be for a valid reason, and the student must make personal contact with the instructor to give or receive information or assignments relative to the course. All work missed during the period of absence must be made up to the satisfaction of the instructor.

A student withdrawn for more than two consecutive weeks of absences without contact or for any other reason may be readmitted through the Student Services Department. Permission to re-enroll will be given only with approval of the instructor. All work missed must be made up. A student may be withdrawn from a course for disciplinary reasons

# Inclement Weather Policy

When the College is officially closed due to inclement weather or other emergencies, on-campus operations and in-person classes are suspended. Closures will be communicated via Cougar Alerts, the college website, and local media. Faculty are expected to maintain instructional continuity through remote learning when possible. This may include online meetings, alternate assignments, recorded lectures, or rescheduled class time. Faculty have discretion in determining the most appropriate approach, provided instructional requirements are met.

Students should check the learning management system (LMS), Cougar Alerts, and college email for updates. If students experience a loss of internet or power during a closure, they should notify their instructors as soon as they are able to make arrangements for making up missed work.

Academic Policies & Procedures

# Alternate Assignments

Instructors who cancel instructional time due to unforeseen circumstances should utilize and document one of the following options to make-up time: a) providing an alternate assignment relevant to course objectives, b) scheduling extra class sessions, c) holding conferences with individual students, or d) extending scheduled class time (requires dean approval). The appropriate form should be submitted to the department chair/program director.

Academic Policies & Procedures

# Graduation Requirements

Graduation exercises are held biannually for an academic year at the close of the spring and summer terms. A student who graduates or anticipates graduation during the academic year (fall or spring) may participate in the ceremonies held on graduation day in the spring. Summer graduates may participate in the summer graduation exercise. Participation in graduation exercises does not signify completion of all graduation requirements. A graduation fee may be charged to students. Graduation fees are used to cover costs for degrees, diplomas, certificates, honorariums, flowers, etc.

Graduation requires the student to have earned at least a 2.0 GPA in the student's academic program and to have maintained at least a 2.0 cumulative GPA. Students who complete graduation requirements and apply for graduation in the fall when a ceremony is not held for degrees to be conferred will have their credentials released after the Board of Trustees meets during the subsequent quarter and confers students' credentials. Graduation is not an automatic process. The student must apply for their degree, diploma, or certificate by the midterm of the term in which coursework is scheduled for completion in order to process their graduation. In compliance with the Student-Right-To-Know and Campus Security Act of 1991, the college's graduation rate and annual crime statistics are available on request from Onboarding and Advising.

## Transcripts

A student may request via electronic request that an official copy of their CCCC transcript be sent to another institution, an agency, or employer. A student may request a copy of their transcript in person, but will be responsible for submitting any such transcript to a third party. Central Carolina Community College does not accept third-party transcript requests. Curriculum transcripts are the responsibility of the Registrar's Office and non-credit transcripts are the responsibility of the Workforce Development Division.

An official curriculum transcript is a copy of a student's entire curriculum-level academic record for Central Carolina Community College. In recognition of the confidentiality of student records, an official transcript will be released only at the request of the student except under due process of the law.

To request a transcript in person, please visit the Registrar's Office at 1105 Kelly Drive, Sanford, NC between the hours of 8:00 a.m. and 5:00 p.m. Monday-Thursday or 8:00 a.m. to 3:30 p.m. on Fridays. Summer hours may vary. In-person requests will be charged a $5.00 fee for each transcript requested. Please bring a picture ID to pick up your transcript.

For electronic requests, the student's Central Carolina student ID number is required for this service, not the social security number. If you place an order without using your student ID number, the order will be canceled. Please contact the Registrar's Office at (919) 718-7201 to obtain your student ID number. Online requests will be charged a $3.75 fee for each transcript and must be paid with a debit/credit card. All online transcript fees are collected by a third-party agency that provides the transcript management and certification system. Through this service, students can order:

- A paper transcript sent via USPS first-class mail
- Electronic transcript that is delivered to any valid email address as a secure PDF

Note: *For students who attended prior to 1997, electronic transcripts may not be available. Please contact the Registrar's Office at (919) 718-7201 to inquire before placing an order.*

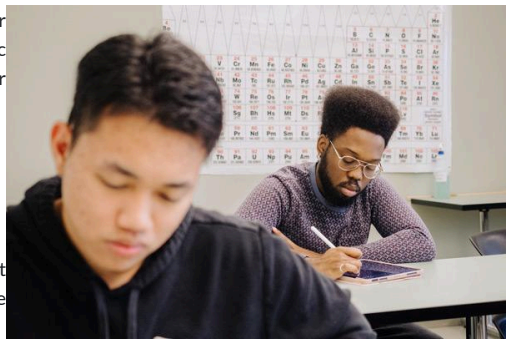
Students wishing to order end-of-term transcripts, should wait two days after the semester has ended to submit their request. Students waiting for degrees to be posted, should submit their request after graduation.

The Registrar's Office will process orders within two business days.

Central Carolina Community College certifies that an electronic transcript (e-transcript) issued by Parchment is an official college transcript. The acceptability of an e-transcript will be determined by the receiving institution/recipient in accordance with their policies and procedures.

# Student Rights & Responsibilities

As a CCCC student, you're part of a respectful and supportive learning community. This section explains your rights—like privacy, due process, and access to resources—as well as your responsibilities, including academic honesty, respectful conduct, and following college policies. Understanding these expectations helps keep our campus safe and focused on learning.



Student Rights & Responsibilities

# Conduct and Student Due Process

CCCC has a genuine concern for the integrity of all students enrolled. Students are required to conduct themselves in a mature and responsible manner. Student Rights, Responsibilities, and Judicial Procedures are detailed in the Student Handbook and CCCC Policies & Procedures Manual.

Student Rights & Responsibilities

## Student Grievance Procedure

**Student Grievance Procedure**

The purpose of the student grievance procedure is to provide a system to channel student complaints against a college employee. Such complaints include academic grades, alleged discrimination, and alleged harassment (see Policies and Procedure Manual).

**Contact for Central Carolina Community College**

Ken Hoyle, Vice President of Student Services
1105 Kelly Drive
Sanford, NC 27330
Phone: (919) 718-7436
Email: khoyle@cccc.edu

**Contact for North Carolina Students**

North Carolina Post-Secondary Education Complaints
c/o Student Complaints
University of North Carolina System Office
223 S. West Street, Suite 1800
Raleigh, NC 27603
Phone: (919) 962-4550
**North Carolina Post-Secondary Education Complaint Website**
Student Complaint Process
Student Complaint Form

**Contact for Students Residing Outside North Carolina**

SARA North Carolina Director
NCSEAA
P.O. Box 41349
Raleigh, NC 27629
Phone: (855) 727-2162
Email: complaint@saranc.org
SARA North Carolina Website
Student Complaint Process
Student Complaint Form

**Contacts for State Portal Entities**

Students residing outside of North Carolina while taking online courses at CCCC may also file a complaint with their state. Here is a list of agencies in each state responsible for handling complaints regarding out-of-state distance education programs:

Student Complaint Information by State and Agency

**How To File a Complaint with the Southern Association of Colleges and Schools Commission on Colleges**

Southern Association of Colleges and Schools Commission on Colleges (SACSCOC)
1866 Southern Lane
Decatur, Georgia 30033-4097
Phone: (404) 679-4500
SACSCOC Website
SACSCOC Complaint Policy

## Appealing a Grade

Students have the right to appeal any grade within fifteen (15) class days after the posted date of the grade. The procedure prescribed for a student to exercise the right to appeal a grade can be found in the college's academic policies.

Student Rights & Responsibilities

# Title IX

**Title IX/Sexual Misconduct**

Title IX of the Education Amendments of 1972 provides protection to all members of the campus community against discrimination based on Sex. Central Carolina Community College is committed to upholding Title IX protections by providing an environment that is free from sex/gender-based misconduct in any form. To accomplish these commitments, the College has developed a strict Title IX policy, a strong Student Code of Conduct, and established a Title IX Coordinator and a Deputy Title IX Coordinator who enforces Title IX laws and regulations.

**What types of misconduct/discrimination is included in Title IX?**

Any misconduct that is sex/gender-based is prohibited under Title IX, and includes sexual/gender-based harassment, rape, sexual assault, forcible and non-forcible sex offenses, domestic or dating violence, and stalking. For more information and definitions, please see the CCCC Title IX policy in the Policies and Procedures Manual (URL: https://www.cccc.edu/consumer-information-compliance/policies-procedures) or Student Handbook (URL: https://www.cccc.edu/support-success/advising/student-handbook).

**How do I report a Title IX violation?**

You can report in person to the Title IX Coordinator, the Deputy Title IX Coordinator, to a faculty or staff member, or online. You can report a violation that has happened to someone else, or you can report a violation for yourself. The College prohibits Retaliation (any adverse action against a reporting party) against someone who reports a possible Title IX violation. False accusations are also prohibited.

**Is my report confidential?**

We understand the desire to keep information confidential, and will do everything we can to maintain confidentiality as allowed under law. However, full confidentiality is not always possible. If there is an immediate threat to the campus community, to other information that is required by law to be reported, the Title IX Coordinator/Deputy Title IX Coordinator will act appropriately.

Even if a person does not wish to file a formal complaint with the college or with law enforcement, interim measures may be enacted to ensure their safety. These measures may include adjusting their class schedule, additional time to complete class, or other adjustments that will alleviate any barriers to education.

**What happens when a report is made?**

When there is a report of a possible Title IX violation, the Title IX Coordinator will act promptly to end the discrimination, provide remedies for the victim and the campus community, and put steps in place to prevent reoccurrence of the misconduct. The Title IX Coordinator will also provide outside resource information and assistance as appropriate to the situation.

**Tips for assisting someone who has experienced sexual assault or violence:**

- If you are a CCCC employee, be sure to tell the person that you are required to report Title IX violations that occur on campus or that involve a student, faculty, or staff member
- Actively listen, provide nonjudgmental support, and do not ask questions that suggest blame or doubt
- Encourage the person to seek medical assistance as soon as possible, if needed
- Refer them to appropriate agencies and/or police
- Encourage them to speak to Security, Title IX Coordinator, or appropriate staff
- Use the online reporting form (URL: https://www.cccc.edu/support-success/central-carolina-cares/file-report) to alert the college about the incident

**Where Can I Find Out More About Title IX?**

To review the complete Title IX policy see the college's Policies and Procedures Manual or Student Handbook.

**Questions**

For questions regarding Title IX policy, please contact: Title IX Coordinator, Kevin Pearson, Dean of College Access Services
Lee Main Campus, Marchant Hall 9125
1105 Kelly Dr. | Sanford, NC 27330
Phone: (919) 718-7386
Email: titleix@cccc.edu

Student Rights & Responsibilities

# Campus Sex Crimes Prevention Act Information

The Campus Sex Crimes Prevention Act is a federal law that requires institutions of higher education to inform the campus community where law enforcement agency information on registered sex offenders is available. Additionally, the law requires persons registered as sex offenders, and who are employed by the institution, who carry on a vocation at the institution, or who attend classes at the institution, to notify the institutions of higher learning of their presence on campus.

Information regarding individuals on the registered sex offenders' list can be obtained from the sheriff's office in Chatham, Harnett, and Lee counties. Additionally, the North Carolina Department of Corrections website provides access to search offender information by the offense committed, the county in which the offense was committed, the date of admission into a correctional facility, and the offender's status and release date.

Student Rights & Responsibilities

# Family Educational Rights and Privacy Act

CCCC protects the privacy of students in accordance with the Family Educational Rights and Privacy Act (FERPA) of 1974 (the "Act"), as amended, enacted as Section 444 of the General Education Provisions Act. This policy is applicable for all students, regardless of the mode of instructional delivery for the courses in which the students are enrolled.

Under this Act, students have the right to:

- Inspect and review their education records;
- Seek amendment of their education records that they believe to be inaccurate, misleading, or otherwise in violation of their privacy rights;
- Consent to disclosures of personally identifiable information contained in their record, except to the extent that the Act (and in particular Section 99.31) authorizes disclosure without consent; or
- File with the U.S. Department of Education a complaint under Sections 99.63 and 99.64 concerning alleged failures by the college to comply with the requirements of the Act.

CCCC allows disclosure of education records to administrative officials, faculty, and staff who are determined to have a legitimate educational interest. Administrative officials and faculty/staff are considered to have a legitimate educational interest if they might reasonably need to access information to advise or assist a student with any college-related matter.

CCCC may disclose directory information without consent. Directory information means information contained in the education record of a student which would not generally be considered harmful or an invasion of privacy if disclosed. CCCC has designated directory information to be the following:

- Name
- County of residence
- Academic major
- Enrollment periods
- Hours earned
- Degrees awarded
- Awards received

A student has the right to refuse to let CCCC designate any or all types of information about him/her as directory information.

Student Rights & Responsibilities

## Leon's Law

## Leon’s Law

Under North Carolina’s Leon's Law (N.C.G.S. § 115D-10.80), community colleges must, as permitted under FERPA, share educational records of certain minor students with their parents, guardians, or acting guardians if:

- The student is under age 18,
- Is claimed as a dependent, and
- The parent or guardian has not opted out.

Minor students must sign an acknowledgment form before registering for courses. Educational records may also be shared with school administrators and counselors at the student’s high school if the student is dually enrolled.

Student Rights & Responsibilities

# College AI Statement

Generative artificial intelligence (AI) is quickly developing technology and is not always reliable. Your instructor will indicate in writing what level of AI use is allowed, based on the CCCC Acceptable AI Use Chart.

## CCCC Acceptable AI Use Chart

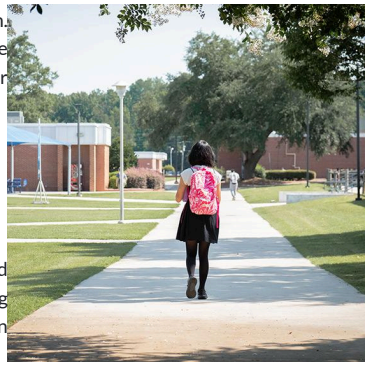
| | Level of AI Use | Description | Disclosure Requirements |
|---|---|---|---|
| AI-0 | No AI Use | The graded coursework must be completed without any AI assistance. | No AI disclosure required. |
| AI-1 | AI-Assisted Generation, Structuring, and Editing | The graded coursework can use generative AI for brainstorming, organizing, or editing purposes. The final submission must be the student's own work. | AI disclosure statement that indicates how AI was used. Instructors may request copies of prompts and/or screenshots of AI interaction. |
| AI-2 | AI for Specified Task Completion | AI can be used to complete parts of the graded coursework per instructor directions. The student must critically engage with and evaluate the AI output. | All AI created content must be cited using proper formatting (per instructor direction). Instructors may request copies of prompts and/or screenshots of AI interaction. |
| AI-3 | Full AI Use with Human Oversight | The student may use AI how the student believes it can best support them in the graded coursework. However, the generative AI is a tool and the AI-generated product must be evaluated before submission. | All AI created content must be cited using proper formatting (per instructor direction). Instructors may request copies of prompts and/or screenshots of AI interaction. |
| AI-4 | Full AI Freedom | These activities (graded or not) are designed for creative exploration, student self-assessing, comprehension help, etc. Students are responsible for accuracy of information obtained. | If the work is submitted, there must be an AI disclosure statement that indicates how AI was used. Instructors may request copies of prompts and/or screenshots of AI interaction. |

Student Rights & Responsibilities

# Communicable Diseases

Please refer to the Central Carolina Community College Policy and Procedure Manual (URL: https://www.cccc.edu/consumer-information-compliance/policies-procedures) for the college’s most current communicable disease information and policy.

# Student Resources



Central Carolina Community College offers a wide range of support services to help students succeed in and out of the classroom. From academic advising and tutoring to mental health counseling, career services, and technology support, these resources are designed to meet students' diverse needs and goals. Whether you're looking for help with your coursework, planning your transfer path, or navigating college life, we're here to support your journey.

Student Resources

## Academic Assistance Center

The Academic Assistance Center (AAC) supports the mission of Central Carolina Community College by providing in-person and virtual tutoring services in a learner-centered environment. The STEM Lab has daily drop-in hours Monday - Friday and Upswing Virtual Tutoring access is available to students every day at any hour. The AAC also offers test proctoring services and open computer lab usage. All of these services are free to CCCC students with locations on each main campus:

**Lee AAC**
○ Marchant Hall, Room #9127
○ (919) 718-7361

**Harnett AAC**
○ Miriello Building, Room #126
○ (910) 814-8869

**Chatham AAC**
○ Building 42, Room #202
○ (919) 545-8029

Student Resources

## Student Activities

The college shall attempt to enrich the academic and social growth of the students and promote a vibrant, positive student life experience by offering a wide range of student activities under the supervision of the Student Services Division. The Office of Student Activities oversees the Student Government Association, all student clubs and organizations, student leadership programs, the Angel Tree program, and plans fun, interactive, and educational programs both on-campus and virtually. All events and activities hosted by the Office of Student Activities are completely free for all students.

The Student Activities Coordinator will assist club advisors and students with the club application process and yearly paperwork required to continue existing clubs. Student fee funds may be available to active student clubs. Current clubs and organizations can be found on the "Get Involved" section on the CCCC Campus Life webpage.

Upcoming Student Activities can be found on the Student Activities Website, Student Activities Social Media, and the College Activities Calendar.

Website: www.cccc.edu/studentlife
Calendar: www.cccc.edu/calendar
Facebook: Central Carolina Community College Student Activities
Instagram: @ccccStudentActivities

Student Resources

## Student Centers

Student Centers are located on all three campuses to provide an area for students to relax while not attending class. Students are encouraged to use the centers as places to meet, chat, eat, and relax. Visit the CCCC Student Centers & Lounges page to learn more, including information about hours of operation.

Student Resources

## Alumni

CCCC values its alumni! If you'd like to give back to the college, consider making an annual gift of any amount. For more information, call (919)718-7230.

Student Resources

## Athletics

Central Carolina Community College is a member of the National Junior College Athletic Association (NJCAA)- Division III, Region 10. Students participating in intercollegiate athletics must meet NJCAA eligibility requirements and standards. CCCC College athletic programs include the following:

- Basketball: CCCC sponsors intercollegiate men's and women's teams when there is sufficient student interest. Intramural basketball may also be sponsored if sufficient interest is indicated and facilities are available for use.
- Volleyball: CCCC sponsors a women's volleyball team in intercollegiate play when there is sufficient student interest.
- Cross Country: CCCC sponsors a men's and women's team where there is sufficient student interest.
- Other Athletics: Other athletic teams may be formed for men and/or women's sports as dictated by student interest.

Student Resources

# Career Center Services

Career services are available through the Career Center in Workforce Development. The Career Center assists students in selecting a curriculum major, preparing for a career, and transitioning from a student to a professional. The center offers online career assessments, a reference library, Internet research stations, and workshops and individual one-on-one sessions covering areas such as resume writing, cover letters, thank you notes, interviewing techniques, and job searches. The Career Center maintains partnerships with North Carolina Works Career Centers, Vocational Rehabilitation, Veterans Office and business and industries throughout the college's service area.

Student Resources

# Phi Theta Kappa Honor Society

The Phi Theta Kappa Honor Society at Central Carolina Community College serves to promote scholarship, development of leadership and service, and cultivation of fellowship among its members. To qualify as candidates for membership, students must meet the following requirements:

1. Must have completed 12 semester hours of associate degree coursework.
2. Must have achieved a grade point average of 3.7 on a 4.0 scale and subsequently, maintain a cumulative grade point average of 3.5 on a 4.0 scale.
3. Must adhere to the Student Code of Conduct and be a student in good standing.

Members of Phi Theta Kappa are honored at college commencement exercises by a special designation on their diplomas and special regalia worn with their graduation robes.

Student Resources

# Student Government Association

The Student Government Association (SGA) is the student body's self-government and the official voice of the student body. The SGA is committed to promoting student personal, social, and academic growth through student activities. The SGA provides the environment for students to create and implement activities as they desire under the direction of Student Services staff. The Student Activities office is the home of the Student Government Association where a team of students work alongside the Student Activities Coordinator to plan and implement special events for CCCC students.

The SGA's organizational structure consists of an Executive Committee made up of the following officers: President, Vice President, Secretary, Treasurer, Historian, and student club representatives. The President of the SGA represents the student body as a non-voting member on the Board of Trustees. SGA Elections are held once a year at the end of the Spring semester where new officers are voted in by their peers. Officers receive stipends to help pay for their college expenses in return for their work with the SGA.

Learn more about the Student Government Association, including ways to get involved.

Student Resources

# Library Services

The CCCC Libraries consist of the Lee Main Campus Library (Sanford), the Harnett Main Campus Library (Lillington), and the Chatham Community Library (Pittsboro). The Chatham Campus Library merged with the Chatham Public Library in September 2010 to form a joint-use library located on the Chatham Main Campus in Pittsboro. All libraries provide assistance to students, faculty, and community patrons.

Library campus locations and phone numbers:

- **Lee Main Campus Library (Sanford) Phone:** (919) 718-7244 **Fax:** (919) 718-7378
- **Harnett Main Campus Library (Lillington) Phone:** (910) 814-8843 **Fax:** (910) 814-8894
- **Chatham Community Library (Pittsboro) Phone:** (919) 545-8084

Library hours are on the library web site.

***NOTE:*** *Summer hours and semester break hours at the libraries vary and are posted at each campus library.*

Student Resources

# Library Cards and Student IDs

Student ID cards are required for students to borrow materials. You must be registered for current classes to receive a student ID card. For students at the Lee and Harnett Main campuses, the student ID card is also the library card and can be made at the Lee and Harnett Libraries. At the Chatham Main Campus, IDs are made in Student Onboarding and Success in the Administration Building. Students at the Chatham Main Campus should go to the reference desk at the Chatham Community Library for a library card. Please let the Chatham library staff know that you are a CCCC student. Alternatively, all students may request a student ID card online. This card may be mailed to your home address or picked up in person.

Student Resources

# TRiO Student Support Services & STEM-Health Sciences

Student Support Services (SSS) is a federally-funded TRiO program designed to assist college students with academic skills and motivation to successfully complete a postsecondary education degree. The goal of the Student Support Services program is to increase the college retention and graduation rates of its participants. The program serves 260 eligible students of all majors each year. Eligibility criteria is any combination of the following: first generation, low income, or disability. Selected students are also eligible to receive grant aid awards of at least $700.00.
Program services include:

- Academic tutoring, which may include instruction in reading, writing, study skills, mathematics, science, and other subjects;

- Advice and assistance in postsecondary course selection;
- Information on both the full range of student financial aid programs and benefits;
- Assistance in completing financial aid applications, including the FAFSA and scholarship information;
- Education or counseling services designed to improve the financial and economic literacy of students,
- Assistance in applying for transfer admission to, and obtaining financial assistance for enrollment in, four-year postsecondary education programs.
- Individualized counseling for personal, career, and academic matters;
- Career exploration;
- Exposure to cultural events and academic programs; and
- Mentoring programs.

Campus Contact:
sss@cccc.edu
Phone: 919-718-7536
Appointments available at all campus locations.

Student Resources

# Ombuds/Student Advocate

CCCC wants our students to feel seen, heard and valued on our campus. However, students may occasionally face challenging situations that they are not sure how to navigate or resolve. During the time of your relationship with the college, situations may arise in which you believe the institution has acted in error or that your particular case requires further review. In these situations, if you have already attempted to remedy the problem with the particular office/department, you may submit a complaint form. Following the submission of a complaint form, the College's Ombudsman will follow up with you. Visit Ombuds: Your Student Advocate to learn more.

Student Resources

# Writing and Reading Center

The Writing and Reading Center helps students develop their writing and reading skills with free services such as one-on-one coaching, group coaching sessions, and content-specific workshops. Through these services, students receive constructive feedback on writing assignments, resources to improve reading, research, and writing skills, and recognition of their growth as readers, researchers, and writers.

Writing and Reading Center coaches will help students refine and revise their work at any stage of their academic assignment.

In addition to physical services in the Writing and Reading Center, tutoring is also available via the Online Writing Center (OWL). Students taking online or evening classes can submit work for review and receive constructive feedback in no more than 48 business hours. To access the OWL, use the A–Z index on the homepage.

The Writing and Reading Center is located in the Miriello Building on the Harnett Main Campus in Room 119, Room 202 Building 42 on the Chatham Main Campus, and on the Lee Main Campus in Marchant Hall.

**Campus phone numbers:**
Lee Main Campus (919) 718-7210
Harnett Main Campus (910) 814-8858
Chatham Main Campus (919) 545-8049

# Student Accessibility Services

Central Carolina Community College is in compliance with Section 504 of the Rehabilitation Act of 1973 and the Americans with Disabilities Act signed into law on July 26, 1990. In 1994, Central Carolina Community College established the Office of Student Accessibility Services to facilitate the provisions of reasonable accommodations for all students with disabilities. This office coordinates services between the faculty and the special populations students. Our instructors and staff have experience working with students who have disabilities to help them obtain the education they need to enter the workforce or transfer to a four-year institution.

Central Carolina Community College has a commitment to its students to help them succeed. Therefore, Central Carolina Community College has adapted the following policy to guide its delivery of services to students with disabilities:

No otherwise qualified individual shall, by reason of disability, be excluded from the participation in, be denied the benefits of, or subjected to discrimination under any program or activity at Central Carolina Community College. The college will make program modifications in instructional delivery and provide supplemental services to enable students with disabilities to participate in activities compatible with their condition and interests.

***To Receive Accommodations:***

1. A student completes a standard admission application.
2. The student must identify himself or herself to the Office of Student Accessibility Services and request accommodations appropriate for his or her disability. (Please request a packet from the Office of Student Accessibility Services.)
3. The student may be referred to the Office of Student Accessibility Services by high school officials, community agencies, parents, Central Carolina Community College faculty or staff, or may self-refer.
4. The student must provide current documentation (no older than 5 years) of the disability for which accommodations are requested. See Student Accessibility Services for documentation standards.
5. Once documentation is received, the student and coordinator will meet to determine necessary accommodations and complete a service contract.
6. The student completes a Student Schedule Request at the beginning of each semester enrolled as well as anytime their schedule changes, giving the student accessibility coordinator permission to notify instructors of accommodations.
7. The Coordinator of Student Accessibility Services sends Accommodations Request form to the student's instructors each term outlining accommodations to which the student is entitled.

## Academic Standards

Students with disabilities are expected to meet the same level of academic standards as all other students. The purpose of an accommodation is to minimize the impact of the disability.

# Recruitment of Service Members

In compliance with Department of Defense MOU paragraph 3.j.(3), Central Carolina Community College does not participate in high pressure recruitment tactics of military students including, but not limited to, providing commissions, bonuses, or other incentive payment programs to employees or contractors for the purpose of securing service member enrollments.

## Loan Information for Service Members

Central Carolina Community College does not participate in the Federal Direct Loan Program. The Student Loan Cohort Default Rate (CDR) for Central Carolina is 0%. The college certifies private loans. Before certification of a private loan can take place, service members are required to meet with a trained and qualified Financial Aid Specialist for loan counseling.

## Financial Aid Information for Service Members

Information regarding the financial aid process and deadlines is located on the CCCC website.

Active duty military may be eligible to receive Tuition Assistance to help with the cost of attending CCCC. Please follow this link for information on applying for these benefits. Options for Financing Higher Education.

## Veterans Affairs Office

Central Carolina Community College's Veterans Affairs Office is available to assist the veterans and their eligible dependents in processing their VA applications to receive educational benefits (GI Bill®), as well as to help them solve VA problems. CCCC has a Veterans Affairs Coordinator whose office is located in Student Services.

Students eligible for VA educational benefits should follow the procedures outlined below:

- Notify the Veterans Affairs Coordinator of intent to apply for VA benefits.
- Select a program and apply for admission to the college. All admission requirements must be completed before VA benefits can be certified.
- Before registration, contact the Veterans Affairs Coordinator to ensure that all enrollment and VA document data are correct and complete. Students must inform the Veterans Affairs Coordinator of their class schedule each semester. Failure to inform the Veterans Affairs Coordinator of changes in students' schedules may result in a lapse of educational benefits.

## Standards of Progress, Attendance, and Conduct for Students receiving VA Educational Benefits

Public Law 93-508 requires that each educational institution approved for veterans to receive educational benefits (GI Bill®) must establish written policies that clearly state what is expected of the veteran in the areas of academic progress, class attendance, and conduct. These standards are as follows:

1. *Academic Progress for VA Educational Benefits recipients*
   Students receiving VA Educational Benefits must maintain a grade point average (GPA) of 2.0 each semester or term in which they are enrolled. Failure to maintain a GPA of 2.0 will result in probation for the subsequent term of enrollment. If, at the end of that probationary term the GPA is still less than a 2.0, VA Educational Benefits will be terminated. Benefits cannot be reinstated until such time as the student regains satisfactory academic progress. Information on CCCC's grade system and GPA calculation is located in the college catalog. Eligible veterans or dependents can appeal their termination of benefits by completing the appeal form in the VA Office. This policy is used as the basis for determining a student's status for enrollment certification purposes to the Veterans Administration.
2. *Attendance*
   Classroom attendance requirements are the same for veterans and non-veterans. Policies regarding class attendance are listed in the college catalog and the student handbook. Veterans who receive educational benefits and are dropped from class due to inadequate attendance may be terminated from receiving educational benefits. Failure to notify the veteran's coordinator of any change in classes, including class hours, may result in an overpayment in educational benefits and a debt for the student.
3. *Conduct*
   Student conduct requirements are the same for veterans and non-veterans. Policies regarding student conduct are listed in the college catalog and in the student handbook.

## Veterans Upward Bound

Veterans Upward Bound is a federal grant-funded program designed to motivate and assist veterans in the development of academic and other requisite skills necessary for success in a program of postsecondary education. The primary goal of the program is to increase the rate at which participants enroll in and complete postsecondary education programs.

The program provides: academic refresher courses; tutorial services; academic, financial, or personal counseling; mentoring programs; information on postsecondary education opportunities; assistance in preparing for college entrance exams; assistance in completing college entrance and financial aid applications; Information on the full range of Federal student financial aid programs and benefits; education or counseling services designed to improve financial and economic literacy; and assistance in securing support services from other locally available resources such as the Veterans Administration, state veterans agencies, veteran associations, and other state and local agencies that serve veterans.

All services are provided free of charge to eligible participants. Anyone interested in receiving additional information may contact the program by visiting Hockaday Hall, by calling 919-718-7463, or by emailing veteransub@cccc.edu. You can also find more information about the program online at Veterans Upward Bound.

# Career Communities



## Who you learn with can be as important as what you learn together.

CCCC's career communities are clusters of programs in related academic and career fields that require similar skills and generally have common curricular elements. Career communities engage networks of faculty, staff, students, alumni, and employers to help you define your interests, choose your program of study, and advance your goals in specific fields. Each career community provides you with skills, knowledge, and opportunities to pursue rewarding careers as well as connections to people on the same path.

Career communities at CCCC foster a sense of belonging to support you through each stage of your professional development as you work towards an associate degree, diploma, certificate, or certification, as well as your professional life beyond.

# Arts Career Community



## Find a supportive community to advance your academic goals.

Be a part of the diverse, imaginative student population that engages in our Arts Career Community programs. A background in liberal arts enables you to thrive by engaging with the social and global world around you or crafting content that matters. The Arts Career Community offers flexible pathways that align with your academic and creative aspirations through networking and events that foster connections.

Meet with instructors, alumni, mentors, and employers across the region to help determine your short and long-term goals and prepare you for next steps after graduation.

Through the Arts Career Community, graduates step into a variety of roles: lawyers, interpreters, copy editors, educators, radio personalities, and music producers. As a gateway to a bachelor's degree in liberal arts, humanities, and social sciences, we open doors to limitless opportunities.

## Explore Arts Programs

Associate in Arts

Audio and Video Production Technology AAS

Audio Production Technology Diploma

Video Production Technology Diploma

Audio Production Certificate

Video Production Technology Certificate

# Applied Technologies Career Community



## Develop new skills with the support of your professional community.

Every year brings advances in sustainable agriculture, automotive industries, manufacturing, building construction, and infrastructure. Whether you are a new student or coming back to further your education in a specialized field, CCCC's Applied Technologies Career Community supports your journey into new opportunities.

In the Applied Technology Career Community at CCCC, you will be able to connect with peers and network with instructors, alumni, mentors, and employers across the region. Events are designed to help you determine your short and long-term goals as you prepare for your next steps after graduation.

## Explore Applied Technologies Programs

Air Conditioning, Heating & Refrigeration Technology

Air Conditioning, Heating & Refrigeration Tech Diploma

Air Conditioning, Heating & Refrigeration Basic Certificate

Air Conditioning, Heating & Refrigeration Tech Core I Cert.

Air Conditioning, Heating & Refrigeration Core 2 Certificate

Air Conditioning, Heating & Refrigeration Tech Intermed Cert

Automotive Restoration Technology (Diploma)

Automotive Restoration Technology Certificate

Automotive Systems Technology Traditional Track AAS

Automotive Systems Technology Diploma

Automotive Systems Technology Electric Vehicle Track AAS
Automotive Systems Technology Electric Vehicle Diploma
Automotive Systems Technology Electr Vehicle Servicing Cert.
Biotechnology-Bioprocess Manufacturing Technology AAS
Biotechnology-Bioprocess Manufacturing Tech. Certificate
Biotechnology Quality Control Certificate
Building Construction Technology AAS
Building Construction Technology Diploma
Building Construction Technology Certificate
Building Construction Electrical Certificate
Computer-Integrated Machining Technology AAS
Computer-Integrated Machining Certificate
Computer Integrated Machining Die & Mold Certificate
Collision Repair and Refinishing Technology
Electrical Systems Technology
Electrical Systems Technology Diploma
Electrical Systems Technology Certificate
Electrical Systems Technology Residential Electrical Cert.
Industrial Systems Technology AAS
Industrial Systems Technology Diploma
Industrial Systems Technology Electrical Controls Cert.
Industrial Systems Technology Industrial Hydraulics Cert.
Industrial System Technology Programmable Logic Certificate
Industrial Sys.Tech. Foundations of Adv Manufacturing Cert.
Motorcycle Mechanics Diploma
Motorcycle Mechanics Certificate
Welding Technology
Welding Technology Diploma
Welding Technology Certificate
Robotics Welding Certificate
Welding Career Certificate

## Business Technologies Career Community



## Programs that focus on management and business administration.

Welcome to our Business Technologies Career Community at CCCC, where you can study the ins and outs of working with every type of business from dynamic startups to global corporations. Our community helps you gain the analytical, organizational, and collaborative skills that modern businesses need at all levels of management.

Understand the intricacies of finance, marketing, law, and ethics with a blend of theory and practice that goes beyond what you can learn in a textbook. Your new skills will be transferable across a variety of industries, including law, healthcare, finance, management, media, government, and not-for-profit organizations.

## Explore Business Technologies Programs

Accounting and Finance AAS

Accounting and Finance Diploma

Income Tax Preparer Clerk Certificate

Payroll Accounting Certificate

Small Business Financial Advisor Certificate

Business Administration General Track AAS

Business Administration Management Diploma

Business Administration Entrepreneur Certificate

Business Administration Retail Management Certificate

Business Administration Social Media Certificate

Business Administration Human Resource Track AAS

Business Administration Diploma-Human Resources

Business Administration HRM Certificate

Medical Office Administration AAS

Medical Office Administration Diploma

Medical Office Administration Insurance Coding Certificate

Office Management Diploma

Office Management Receptionist Certificate

Paralegal Technology AAS

Paralegal Technology Diploma

Paralegal Technology Certificate

# Health Sciences Career Community



## Programs that focus on the health and wellness of everyone.

Do you have a passion for helping others feel better? Or perhaps, your dream job involves working with animals. In the Health Sciences Career Community programs, you'll develop exceptional communication skills, meticulous attention to detail, and an expanded ability to think critically—necessary skills that help you excel in the health and veterinary sciences.

Our hands-on approach to Health Science education lets you hone your skills in well-equipped labs, working with medical equipment, and even advanced simulation mannequins. For our Veterinary Medical Technology students, our large animal facility gives you experience working directly with a variety of species and breeds.

All of our programs include valuable clinical rotations at healthcare facilities, working alongside a diverse group of professionals in medical and wellness environments in your chosen field of human health or veterinary sciences. Whether you see yourself in nursing, medical imaging, physical therapy, dental hygiene, working in a lab, or as a vet tech, the opportunities are vast. Our community helps prepare you for meaningful employment in improving lives, locally and nationwide.

## Explore Health Science Programs

Associate Degree Nursing
Dental Assisting (Diploma)
Dental Hygiene AAS
General Occupational Technology
Health and Fitness Science AAS
Health and Fitness Science Diploma
Health and Fitness Science Certificate
Health Information Technology AAS
Medical Billing and Coding Diploma
Health Information Technology Data Analytics Certificate
Health Information Technology Electronic Health Records Cert
Health Information Technology Patient Access Certificate
Medical Assisting AAS
Medical Assisting Diploma
Medical Sonography AAS
Practical Nursing (Diploma)
Physical Therapist Assistant (2-year program)
Social and Human Services AAS
Social and Human Services Diploma
Veterinary Medical Technology

# Professional Services Career Community



## Programs that help people live their best lives.

Want a career where you help people look, feel, and live their best lives? The Professional Services Career Community at Central Carolina Community College could be the perfect fit. Professional services programs give you the skills you need while developing critical thinking, cultural competence, and professionalism skills that align with your creativity and career interests. Through internships and practical training in fields as diverse as education, mental health, culinary arts, and cosmetic arts, students gain real-world experience and learn to build positive client relationships. All along the way, CCCC's Career Community offers you the support, resources, and education you need to embark on a fulfilling career of your choice.

## Explore Professional Services Programs

Associate in Arts in Teacher Preparation (AATP)

Associate in Science in Teacher Preparation (ASTP)

Barbering AAS

Barbering Diploma

Barbering-Certificate

Cosmetology AAS

Cosmetology Diploma

Cosmetology Certificate

Cosmetology Instructor (Certificate)

Culinary Arts AAS

Culinary Fundamentals Certificate

Early Childhood Education Career Track AAS

Early Childhood Education Non Licensure AAS

Early Childhood Education Licensure AAS

Early Childhood Education Diploma

Early Childhood Education Family Home Certificate

Infant/Toddler Care (Certificate)

Early Childhood Administration Certificate

Early Childhood Preschool Certificate

Elementary Education Residency Licensure Certificate

Esthetics Technology (Certificate)

Esthetics Instructor (Certificate)

Manicuring/Nail Technology (Certificate)

# Public Safety Career Community



## Programs that focus on creating and sustaining safer communities.

Our Public Safety Career Community helps students develop essential skills that inform successful careers in law enforcement, firefighting, emergency medical services, or other roles in public safety. Students find work at the local, state, federal, and international levels, and have networking opportunities to explore careers in publicly funded agencies as well as private safety and security companies.

Join us at Central Carolina Community College to discover new possibilities in the Public Safety Career Community and find a rewarding future in service.

## Explore Public Safety Programs

Basic Law Enforcement Training (Certificate)

Criminal Justice Technology Associate in Applied Science

Criminal Justice Technology Diploma

Criminal Justice Technology Certificate

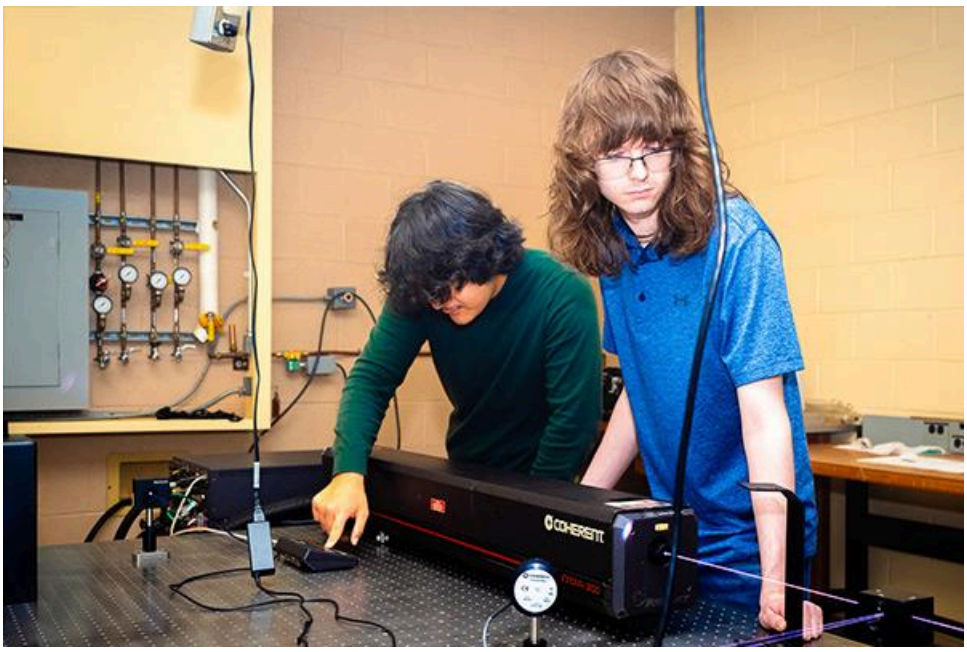
Criminal Justice Technology Forensic Science AAS

Criminal Justice Technology Forensic Science Certificate

Emergency Medical Service Bridge Option

Public Safety Administration AAS

# STEM Career Community




## Supporting Your Future in Science, Technology, Engineering, and Math (STEM)

Welcome to Central Carolina Community College's STEM Career Community where programs pave the way for exciting careers in growing industries. Through our STEM programs, you have the opportunity to explore mathematics or natural science topics. You may also be interested in using technology to make processes more efficient. The possibilities are endless! Graduates step into roles as technicians, analysts, engineers, and scientists throughout North Carolina and across the nation.

Our STEM Career Community helps you develop your own goals whether you want to transfer to a four-year institution to pursue a bachelor's degree or enter the workforce directly. Join us in the STEM Career Community to be part of collaborating on the future we want to live in together.

## Explore STEM Programs

Associate in Engineering

Associate in Science

Computer Engineering Technology AAS

Electronics Engineering Technology AAS

Electronics Engineering Technology Certificate

IT-Business Systems & Operations Support AAS

IT-Business Systems & Operations Support Diploma

IT-Swift Programming Certificate

IT-Database Programming Certificate

IT-Internet & Computing Core IC3 Certificate

IT-Computer Hardware Troubleshooting Repair Certificate

IT-Coding and Programming Certificate

IT- Network & Cybersecurity Management AAS

IT-Network & Cybersecurity Management Diploma

IT-Network Infrastructure Certificate

IT-Network Operating System Certificate

IT-Network Security Certificate

Laser and Photonics Technology AAS

Library and Information Technology AAS
Library and Information Technology Diploma
Library & Information Technology Cataloging Certificate
Library & Information Technology Library Programs Cert.
Library & Information Technology Public Service Certificate
Library & Information Technology Library Tech Services Cert.
Library & Information Technology Library Basics Certificate
Library & Information Technology Library Management Cert.
Mechanical Engineering Technology AAS
Mechanical Engineering Technology Graphics Certificate
Sustainable Agriculture
Sustainable Agriculture Certificate
Sustainable Agriculture Ecological Landscaping Certificate
Sustainable Livestock Certificate
Sustainable Vegetable Production Certificate

# All Programs

## A10100 - Associate in Arts

### Overview

**Program Code**
A10100

**Program Description**
The Associate in Arts degree shall be granted for a planned program of study consisting of a minimum of 60 semester hours of credit (SHC) of college transfer courses. Within the degree program, the institution shall include opportunities for the achievement of competence in reading, writing, oral communication, fundamental mathematical skills, and basic computer use.

Courses are approved for transfer through the Comprehensive Articulation Agreement (CAA). The CAA enables North Carolina community college graduates of two-year associate in arts programs who are admitted to constituent institutions of The University of North Carolina to transfer with junior status.

Community college graduates must obtain a grade of "C" or better in each course and an overall GPA of at least 2.0 on a 4.0 scale in order to transfer with a junior status. Courses may also transfer through bilateral agreements between institutions.

The Associate in Arts is a two-year degree designed for students who plan to transfer to a four-year college or university to complete a bachelor's degree in a non-STEM field—such as business, education, the social sciences, humanities, or the arts. This degree provides a strong foundation in general education courses like English, history, math, and social sciences that fulfill many of the first- and second-year requirements at most universities.

Students pursuing the AA degree follow *Transfer Guides* to help ensure that the courses they take at the community college transfer smoothly into their intended major at a UNC System university.

To explore Transfer Guides for your intended major and transfer institution, visit the CFNC Transfer Guides page.

**Career Pathway Options**
Associate in Arts Degree, Baccalaureate Degree at a Senior Institution

**Career Community**
Arts

**Program Length**
4 semesters

**Credential**
Associate in Arts

### Program Outcomes

### Degree Maps

Associate in Arts
**Total Credits**
7

| Semester | Term | Term Credits |
|---|---|---|
| 1st Semester | Fall | 4 |

**Courses**
- ENG111 - Writing and Inquiry

**Term Credits** 3

**Courses**
- ACA122 - College Transfer Success

**Term Credits** 1

**Courses**
- Required Science & Lab (Generic)

**Term Credits** -

**Courses**
- Required Social/Behavioral Science (Generic)

**Term Credits** -

**Courses**
- Required Humanities/Fine Arts/Communication (Generic)

**Term Credits** -

**Courses**
- Required Social/Behavioral Science (Generic)

**Term Credits** -

| Semester | Term | Term Credits |
|---|---|---|
| 2nd Semester | Spring | 3 |

**Courses**
- ENG112 - Writing and Research in the Disciplines

**Term Credits** 3

**Courses**
- Required Mathematics (Generic)

**Term Credits** -

**Courses**
- Required Humanities/Fine Arts/Communication (Generic)

**Term Credits** -

**Courses**
- Required Social/Behavioral Science (Generic)

**Term Credits** -

**Courses**
- Approved General Education course (Generic)

**Term Credits** -

| Semester | Term | Term Credits |
|---|---|---|
| 3rd Semester | Fall | 0 |

**Courses**
- Required Humanities/Fine Arts/Communication (Generic)

**Term Credits** -

**Courses**
- Approved General Education course (Generic)

**Term Credits** -

**Courses**
- Approved General Education course (Generic)

**Term Credits** -

**Courses**
- Approved General Education course (Generic)

**Term Credits** -

**Courses**
- Approved General Education course (Generic)

**Term Credits** -

| Semester | Term | Term Credits |
|---|---|---|
| 4th Semester | Spring | 0 |

**Courses**
- Approved Other Required Hours course (Generic)

**Term Credits** -

**Courses**
- Approved Other Required Hours course (Generic)

**Term Credits** -

**Courses**
- Approved Other Required Hours course (Generic)

**Term Credits** -

**Courses**
- Approved Other Required Hours course (Generic)

**Term Credits** -

**Courses**
- Approved Other Required Hours course (Generic)

**Term Credits** -

## Program of Study

**Course Requirements for Associate in Arts Degree**

I. Universal General Education Transfer Component (UGETC) 31-32 SHC

**A. English Composition (6 SHC) C-L-CR**

ENG 111 Writing and Inquiry 3-0-3
ENG 112 Writing and Research in the Disciplines 3-0-3

**B. Humanities/Fine Arts/Communication (9 SHC)**

Select courses from at least two of the following discipline areas: art, communications, music, literature, and philosophy.

ART 111 Art Appreciation 3-0-3
ART 114 Art History Survey I 3-0-3
ART 115 Art History Survey II 3-0-3
COM 120 Interpersonal Communication 3-0-3
COM 231 Public Speaking 3-0-3
DRA 111 Theater Appreciation 3-0-3
ENG 231 American Literature I 3-0-3
ENG 232 American Literature II 3-0-3
ENG 241 British Literature I 3-0-3
ENG 242 British Literature II 3-0-3
MUS 110 Music Appreciation 3-0-3
MUS 112 Introduction to Jazz 3-0-3
PHI 240 Introduction to Ethics 3-0-3

**C. Social and Behavioral Sciences (9 SHC)**

Select courses from at least two of the following discipline areas: economics, history, political science, psychology, and sociology.

ECO 251 Principles of Microeconomics 3-0-3
ECO 252 Principles of Macroeconomics 3-0-3
HIS 111 World Civilizations I 3-0-3
HIS 112 World Civilizations II 3-0-3
HIS 131 American History I 3-0-3
HIS 132 American History II 3-0-3
POL 120 American Government 3-0-3
PSY 150 General Psychology 3-0-3
SOC 210 Introduction to Sociology 3-0-3

**D. Natural Sciences (4 SHC)**

Select one course, including accompanying/integrated laboratory work, from among the biological and physical science disciplines.

AST 111 Descriptive Astronomy 3-0-3
& AST 111A Descriptive Astronomy Lab 0-2-1
AST 151 General Astronomy I 3-0-3
& AST 151A General Astronomy I Lab 0-2-1
BIO 110 Principles of Biology 3-3-4
BIO 111 General Biology I 3-3-4
CHM 151 General Chemistry I 3-3-4
GEL 111 Introductory Geology 3-2-4
PHY 110 Conceptual Physics 3-0-3
& PHY 110A Conceptual Physics Lab 0-2-1

**E. Mathematics (3-4 SHC)**

Select one course in introductory mathematics.

MAT 143 Quantitative Literacy 2-2-3
MAT 152 Statistical Methods I 3-2-4
MAT 171 Precalculus Algebra 3-2-4

**II. Additional General Education Hours (13-14 SHC)**

Select additional courses from UGETC courses listed above or from the courses classified as General Education courses in the NCCCS Combined Course Library. Students are advised to select courses based on intended major and senior institution.

ANT 210 General Anthropology 3-0-3
ANT 220 Cultural Anthropology 3-0-3
ASL 111 Elementary ASL 1 3-0-3
ASL 112 Elementary ASL II 3-0-3
ASL 211 Intermediate ASL I 3-0-3
ASL 212 Intermediate ASL II 3-0-3
BIO 112 General Biology II 3-3-4
BIO 140 Environmental Biology 3-0-3
BIO 140A Environmental Biology Lab 0-3-1
CHI 111 Elementary Chinese I 3-0-3
CHI 112 Elementary Chinese II 3-0-3
CHI 211 Intermediate Chinese I 3-0-3
CHI 212 Intermediate Chinese II 3-0-3
CHM 131 Introduction to Chemistry 3-0-3
CHM 131A Introduction to Chemistry Lab 0-3-1
CHM 132 Organic and Biochemistry 3-3-4
CHM 152 General Chemistry II 3-3-4
CIS 110 Intro to Computers 2-2-3
CIS 115 Intro to Prog & Logic 2-3-3
COM 110 Introduction to Communication 3-0-3
COM 140 Intro to Intercultural Communication 3-0-3
ECO 151 Survey of Economics 3-0-3
ENG 113 Literature-Based Research 3-0-3
ENG 114 Prof Research and Reporting 3-0-3
FRE 111 Elementary French I 3-0-3
FRE 112 Elementary French II 3-0-3
FRE 211 Intermediate French I 3-0-3
FRE 212 Intermediate French II 3-0-3
GEL 230 Environmental Geology 3-2-4
HUM 110 Technology and Society 3-0-3
HUM 115 Critical Thinking 3-0-3
HUM 120 Cultural Studies 3-0-3
HUM 122 Southern Culture 3-0-3
HUM 150 American Women's Studies 3-0-3
HUM 160 Introduction to Film 2-2-3
HUM 211 Humanities I 3-0-3
MAT 172 Precalculus Trigonometry 3-0-3
MAT 263 Brief Calculus 3-0-3
MAT 271 Calculus I 3-2-4
MAT 272 Calculus II 3-2-4
MAT 273 Calculus III 3-2-4
MUS 210 History of Rock Music 3-0-3
PHY 151 College Physics I 3-2-4
PHY 152 College Physics II 3-2-4
PHY 251 General Physics I 3-3-4
PHY 252 General Physics II 3-3-4
PSY 237 Social Psychology 3-0-3
PSY 241 Developmental Psychology 3-0-3
PSY 281 Abnormal Psychology 3-0-3
REL 110 World Religions 3-0-3
REL 211 Introduction to Old Testament 3-0-3
SOC 213 Sociology of the Family 3-0-3
SOC 220 Social Problems 3-0-3
SOC 225 Social Diversity 3-0-3
SOC 240 Social Psychology 3-0-3
SPA 111 Elementary Spanish I 3-0-3
SPA 112 Elementary Spanish II 3-0-3
SPA 211 Intermediate Spanish I 3-0-3
SPA 212 Intermediate Spanish II 3-0-3

**III. Other Required Hours (15 SHC)**

In addition to ACA 122 (College Transfer Success), 14 SHC can be selected from the UGETC and General Education courses listed above and any courses classified Pre-Major/Elective (listed below) in the Comprehensive Articulation Agreement. Students are advised to select courses based on intended major and senior institution requirements. Students must meet the receiving university's foreign language, health, and physical education requirements, if applicable, prior to or after transfer to the senior institution. Students need to complete two courses in foreign language if two semesters or more of a foreign language were not taken in high school.

ACA 122 College Transfer Success 0-2-1
ACC 120 Principles of Financial Accounting 3-2-4
ACC 121 Principles of Managerial Accounting 3-2-4
ART 121 Design I 0-6-3
ART 122 Design II 0-6-3
ART 131 Drawing I 0-6-3
ART 132 Drawing II 0-6-3
ART 214 Portfolio and Resume 0-2-1
ART 231 Printmaking I 0-6-3
ART 232 Printmaking II 0-6-3
ART 240 Painting I 0-6-3
ART 241 Painting II 0-6-3
ART 281 Sculpture I 0-6-3
ART 282 Sculpture II 0-6-3
ART 283 Ceramics I 0-6-3
ART 284 Ceramics II 0-6-3
ASL 181 ASL Lab I 0-2-1
ASL 182 ASL Lab II 0-2-1
BIO 112 General Biology II 3-3-4
BIO 150 Genetics in Human Affairs 3-0-3
BIO 155 Nutrition 3-0-3
BIO 163 Basic Anatomy and Physiology 4-2-5
BIO 165 Anatomy and Physiology I 3-3-4
BIO 166 Anatomy and Physiology II 3-3-4
BIO 168 Anatomy and Physiology I 3-3-4
BIO 169 Anatomy and Physiology II 3-3-4
BIO 175 General Microbiology 2-2-3
BIO 180 Biological Chemistry 2-2-3
BIO 275 Microbiology 3-3-4
BUS 110 Introduction to Business 3-0-3
BUS 115 Business Law I 3-0-3
BUS 137 Principles of Management 3-0-3
CHM 130 General, Organic and Biochemistry 3-0-3
CHM 130A General, Organic, and Biochemistry Lab 0-2-1
CHM 251 Organic Chemistry I 3-3-4
CHM 252 Organic Chemistry II 3-3-4
CJC 111 Introduction to Criminal Justice 3-0-3
CJC 113 Juvenile Justice 3-0-3

CJC 121 Law Enforcement Operations 3-0-3
CJC 141 Corrections 3-0-3
CJC 212 Ethics & Comm Relations 3-0-3
COM 130 Nonverbal Communication 3-0-3
CSC 134 C++ Programming 2-3-3
CSC 139 Visual BASIC Programming 2-3-3
CSC 151 JAVA Programming 2-3-3
CTS 115 Info Sys Business Concepts 3-0-3
EDU 131 Child, Family, and Community 3-0-3
EDU 144 Child Development I 3-0-3
EDU 145 Child Development II 3-0-3
EDU 216 Foundations of Education 3-0-3
EDU 221 Children with Exceptionalities 3-0-3
EGR 150 Intro to Engineering 1-2-2
EGR 220 Engineering Statics 3-0-3
ENG 125 Creative Writing I 3-0-3
ENG 126 Creative Writing II 3-0-3
HEA 110 Personal Health and Wellness 3-0-3
HEA 112 First Aid & CPR 1-2-2
HIS 222 African-American History I 3-0-3
HIS 223 African-American History II 3-0-3
HIS 226 The Civil War 3-0-3
HIS 236 North Carolina History 3-0-3
MAT 285 Differential Equations 2-2-3
MUS 111 Fundamentals of Music 3-0-3
MUS 260 Intro to Music Education 2-0-2
PED 110 Fit and Well for Life 1-2-2
PED 113 Aerobics I 0-3-1
PED 114 Aerobics II 0-3-1
PED 115 Step Aerobics I 0-3-1
PED 117 Weight Training I 0-3-1
PED 118 Weight Training II 0-3-1
PED 119 Circuit Training 0-3-1
PED 121 Walk, Jog, Run 0-3-1
PED 122 Yoga I 0-2-1
PED 125 Self-Defense Beginning 0-2-1
PED 128 Golf-Beginning 0-2-1
PED 130 Tennis-Beginning 0-2-1
PED 139 Bowling-Beginning 0-2-1
PED 143 Volleyball-Beginning 0-2-1
PED 145 Basketball-Beginning 0-2-1
PED 149 Flag Football 0-2-1
PED 157 Pickleball 0-2-1
PED 171 Nature Hiking 0-2-1
PED 172 Outdoor Living 1-2-2
PED 217 Pilates I 0-2-1
PED 219 Disc Golf 0-2-1
PED 254 Coaching Basketball 1-2-2
PHS 110 Survey of Physical Science 3-2-4
PSY 246 Adolescent Psychology 3-0-3
SOC 215 Group Processes 3-0-3
SOC 232 Social Context of Aging 3-0-3
SPA 141 Culture and Civilization 3-0-3

# A1010T - Associate in Arts in Teacher Preparation (AATP)

## Overview

**Program Code**
A1010T

**Program Description**
The Associate in Arts in Teacher Preparation degree shall be granted for a planned program of study consisting of a minimum of 60 semester hours of credit (SHC) of college transfer courses. Within the degree program, the institution shall include opportunities for the achievement of competence in reading, writing, oral communication, fundamental mathematical skills, and basic computer use.

The Comprehensive Articulation Agreement (CAA) and the Independent Comprehensive Articulation Agreement (ICAA) enables North Carolina community college graduates of two-year associate in arts programs who are admitted to constituent institutions of The University of North Carolina and to Signatory Institutions of North Carolina Independent Colleges and Universities to transfer with junior status.

Community college graduates must obtain a grade of "C" or better in each course and an overall GPA of at least 2.7 on a 4.0 scale in order to transfer with a junior status. Courses may also transfer through bilateral agreements between institutions.

**Career Pathway Options**
Associate in Arts Degree, Baccalaureate Degree at a Senior Institution to enter a Teacher Education program

**Career Community**
Professional Services

**Program Length**
4 semesters

**Credential**
Associate in Arts

## Program Outcomes

## Degree Maps

Associate in Arts in Teacher Preparation
**Total Credits**
24

| Semester | Term | Term Credits |
|---|---|---|
| 1st Semester | Fall | 8 |

**Courses**
- ENG111 - Writing and Inquiry

**Term Credits** 3

**Courses**
- ACA122 - College Transfer Success

**Term Credits** 1

**Courses**
- EDU187 - Teaching and Learning for All

**Term Credits** 4

**Courses**
- Required Natural Science (Generic)

**Term Credits** -

**Courses**
- Required Social/Behavioral Science (Generic)

**Term Credits** -

| Semester | Term | Term Credits |
|---|---|---|
| 2nd Semester | Spring | 7 |

**Courses**
- ENG112 - Writing and Research in the Disciplines

**Term Credits** 3

**Courses**
- EDU279 - Literacy Development and Instruction

**Term Credits** 4

**Courses**
- Required Mathematics (Generic)

**Term Credits** -

**Courses**
- Required Fine Arts/Humanities/Communication (Generic)

**Term Credits** -

**Courses**
- Required Social/Behavioral Science (Generic)

**Term Credits** -

| Semester | Term | Term Credits |
|---|---|---|
| 3rd Semester | Fall | 3 |

**Courses**
- EDU216 - Foundations of Education

**Term Credits** 3

**Courses**
- Required Humanities/Fine Arts/Communication (Generic)

**Term Credits** -

**Courses**
- Approved General Education course (Generic)

**Term Credits** -

**Courses**
- Approved General Education course (Generic)

**Term Credits** -

**Courses**
- Approved General Education course (Generic)

**Term Credits** -

| Semester | Term | Term Credits |
|---|---|---|
| 4th Semester | Spring | 6 |

**Courses**
- SOC225 - Social Diversity

**Term Credits** 3

**Courses**
- EDU250 - Teacher Licensure Preparation

**Term Credits** 3

**Courses**
- Approved Humanities/Fine Arts/Communication (Generic)

**Term Credits** -

**Courses**
- Approved General Education course (Generic)

**Term Credits** -

**Courses**
- Approved General Education course (Generic)

**Term Credits** -

## Program of Study

**Course Requirements for Associate in Arts in Teacher Preparation:**

**I. General Education Requirements:**

**A. Composition (6 SHC) C-L-CR**

ENG 111 Writing & Inquiry 3-0-3
ENG 112 Writing/Research in the Disciplines 3-0-3

**B. Humanities/Fine Arts/Communication (9 SHC)**

Select 3 courses from the following from at least 2 different disciplines (9 SHC)

Communications:

COM 120 Intro to Interpersonal Communications 3-0-3
COM 231 Public Speaking 3-0-3

Humanities/Fine Arts:

ART 111 Art Appreciation 3-0-3
ART 114 Art History Survey I 3-0-3
ART 115 Art History Survey II 3-0-3
DRA 111 Theatre Appreciation 3-0-3
ENG 231 American Literature I 3-0-3
ENG 232 American Literature II 3-0-3
ENG 241 British Literature I 3-0-3
ENG 242 British Literature II 3-0-3
MUS 110 Music Appreciation 3-0-3
MUS 112 Introduction to Jazz 3-0-3
PHI 240 Introduction to Ethics 3-0-3

**C. Social/Behavioral Science**

Select 2 courses from at least 2 different disciplines (6 SHC)

ECO 251 Principles of Microeconomics 3-0-3
ECO 252 Principles of Macroeconomics 3-0-3
HIS 111 World Civilizations I 3-0-3
HIS 112 World Civilizations II 3-0-3
HIS 131 American History I 3-0-3
HIS 132 American History II 3-0-3
POL 120 American Government 3-0-3
PSY 150 General Psychology 3-0-3
SOC 210 Introduction to Sociology 3-0-3

**D. Mathematics, take 1 course (8 SHC)**

MAT 143 Quantitative Literacy 2-2-3
MAT 152 Statistical Methods I 3-2-4
MAT 171 Precalculus Algebra 3-2-4

**E. Natural Sciences (4 SHC)**

AST 111 Descriptive Astronomy 3-0-3
and AST 111A Descriptive Astronomy Lab 0-2-1

AST 151 General Astronomy 3-0-3
and AST 151A General Astronomy Lab 0-2-1

BIO 110 Principles of Biology 3-3-4

BIO 111 General Biology I 3-3-4

CHM 151 General Chemistry I 3-3-4

GEL 111 Introduction to Geology 3-2-4

PHY 110 Conceptual Physics 3-0-3
and PHY 110A Conceptual Physics Lab 0-2-1

**F. Required General Education**

SOC 225 Social Diversity 3-0-3

**II. An additional 14-15 SHC of UGETC courses or General Education classes:**

ANT 210 General Anthropology 3-0-3
ANT 220 Cultural Anthropology 3-0-3
ASL 111 Elementary ASL 1 3-0-3
ASL 112 Elementary ASL II 3-0-3
ASL 211 Intermediate ASL I 3-0-3
ASL 212 Intermediate ASL II 3-0-3
BIO 112 General Biology II 3-3-4
BIO 140 Environmental Biology 3-0-3
BIO 140A Environmental Biology Lab 0-3-1
CHI 111 Elementary Chinese I 3-0-3
CHI 112 Elementary Chinese II 3-0-3
CHI 211 Intermediate Chinese I 3-0-3
CHI 212 Intermediate Chinese II 3-0-3
CHM 131 Introduction to Chemistry 3-0-3
CHM 131A Introduction to Chemistry Lab 0-3-1
CHM 132 Organic and Biochemistry 3-3-4
CHM 152 General Chemistry II 3-3-4
CIS 110 Intro to Computers 2-2-3
CIS 115 Intro to Prog & Logic 2-3-3
COM 110 Introduction to Communication 3-0-3
COM 140 Intro to Intercultural Communication 3-0-3
ECO 151 Survey of Economics 3-0-3
ENG 113 Literature-Based Research 3-0-3
ENG 114 Prof Research and Reporting 3-0-3
FRE 111 Elementary French I 3-0-3
FRE 112 Elementary French II 3-0-3
FRE 211 Intermediate French I 3-0-3
FRE 212 Intermediate French II 3-0-3
GEL 230 Environmental Geology 3-2-4
HUM 110 Technology and Society 3-0-3
HUM 115 Critical Thinking 3-0-3
HUM 120 Cultural Studies 3-0-3
HUM 122 Southern Culture 3-0-3
HUM 150 American Women's Studies 3-0-3
HUM 160 Introduction to Film 2-2-3
HUM 211 Humanities I 3-0-3
MAT 172 Precalculus Trigonometry 3-0-3
MAT 263 Brief Calculus 3-0-3
MAT 271 Calculus I 3-2-4
MAT 272 Calculus II 3-2-4
MAT 273 Calculus III 3-2-4
MUS 210 History of Rock Music 3-0-3
PHY 151 College Physics I 3-2-4
PHY 152 College Physics II 3-2-4
PHY 251 General Physics I 3-3-4
PHY 252 General Physics II 3-3-4
PSY 237 Social Psychology 3-0-3
PSY 241 Developmental Psychology 3-0-3
PSY 281 Abnormal Psychology 3-0-3
REL 110 World Religions 3-0-3
REL 211 Introduction to Old Testament 3-0-3
SOC 213 Sociology of the Family 3-0-3
SOC 220 Social Problems 3-0-3
SOC 225 Social Diversity 3-0-3
SOC 240 Social Psychology 3-0-3
SPA 111 Elementary Spanish I 3-0-3
SPA 112 Elementary Spanish II 3-0-3
SPA 211 Intermediate Spanish I 3-0-3
SPA 212 Intermediate Spanish II 3-0-3

**III. Other required (14 SHC):**

EDU 187 Teaching and Learning for All 3-3-4
EDU 216 Foundations of Education 3-0-3
EDU 279 Literacy Development & Instruction 3-3-4
EDU 250 Teacher Licensure Preparation 3-0-3

**IV. Required ACA (1 SHC):**

ACA 122 College Transfer Success 0-2-1

# A10400 - Associate in Science

## Overview

**Program Code**
A10400

**Program Description**
The Associate in Science degree shall be granted for a planned program of study consisting of a minimum of 60 semester hours of credit (SHC) of college transfer courses. Within the degree program, the institution shall include opportunities for the achievement of competence in reading, writing, oral communication, fundamental mathematical skills, and the basic computer use.

Courses are approved for transfer through the Comprehensive Articulation Agreement (CAA). The CAA enables North Carolina community college graduates of two-year associate in science programs who are admitted to constituent institutions of The University of North Carolina to transfer with junior status.

Community college graduates must obtain a grade of "C" or better in each course and an overall GPA of at least 2.0 on a 4.0 scale in order to transfer with a junior status. Courses may also transfer through bilateral agreements between institutions.

**Career Pathway Options**
Associate in Science Degree, Baccalaureate Degree at a Senior Institution

**Career Community**
STEM

**Program Length**
4 semesters

**Credential**
Associate in Science

## Program Outcomes

## Degree Maps

Associate in Science
**Total Credits**
7

| Semester | Term | Term Credits |
|---|---|---|
| 1st Semester | Fall | 4 |

**Courses**
- ENG111 - Writing and Inquiry

**Term Credits** 3

**Courses**
- ACA122 - College Transfer Success

**Term Credits** 1

**Courses**
- Required Science with Lab (Generic)

**Term Credits** -

**Courses**
- Required Mathematics (Generic)

**Term Credits** -

**Courses**
- Required Humanities/Fine Arts/Communication (Generic)

**Term Credits** -

| Semester | Term | Term Credits |
|---|---|---|
| 2nd Semester | Spring | 3 |

**Courses**
- ENG112 - Writing and Research in the Disciplines

**Term Credits** 3

**Courses**
- Required Mathematics (Generic)

**Term Credits** -

**Courses**
- Required Humanities/Fine Arts/Communication (Generic)

**Term Credits** -

**Courses**
- Required History (Generic)

**Term Credits** -

**Courses**
- Required Science with Lab (Generic)

**Term Credits** -

| Semester | Term | Term Credits |
|---|---|---|
| 3rd Semester | Fall | 0 |

**Courses**
- Approved General Education course (Generic)

**Term Credits** -

**Courses**
- Approved General Education course (Generic)

**Term Credits** -

**Courses**
- Approved General Education course (Generic)

**Term Credits** -

**Courses**
- Approved General Education course (Generic)

**Term Credits** -

**Courses**
- Required Social/Behavioral Science (Generic)

**Term Credits** -

| Semester | Term | Term Credits |
|---|---|---|
| 4th Semester | Spring | 0 |

**Courses**
- Approved Other Required Hours course (Generic)

**Term Credits** -

**Courses**
- Approved Other Required Hours course (Generic)

**Term Credits** -

**Courses**
- Approved Other Required Hours course (Generic)

**Term Credits** -

**Courses**
- Approved Other Required Hours course (Generic)

**Term Credits** -

**Courses**
- Approved Other Required Hours course (Generic)

**Term Credits** -

## Program of Study

**Course Requirements for Associate in Science Degree**

**I. Universal General Education Transfer Component (UGETC) 34 SHC**

**A. Composition (6 SHC) C-L-CR**

ENG 111 Writing and Inquiry 3-0-3
ENG 112 Writing and Research in the Disciplines 3-0-3

**B. Humanities/Fine Arts/Communication (6 SHC)**

Select courses from two of the following discipline areas: art, communications, music, literature, and philosophy.

ART 111 Art Appreciation 3-0-3
ART 114 Art History Survey I 3-0-3
ART 115 Art History Survey II 3-0-3
COM 120 Interpersonal Communication 3-0-3
COM 231 Public Speaking 3-0-3
DRA 111 Theater Appreciation 3-0-3
ENG 231 American Literature I 3-0-3
ENG 232 American Literature II 3-0-3
ENG 241 British Literature I 3-0-3
ENG 242 British Literature II 3-0-3
MUS 110 Music Appreciation 3-0-3
MUS 112 Introduction to Jazz 3-0-3
PHI 240 Introduction to Ethics 3-0-3

**C. Social and Behavioral Sciences (6 SHC)**

Select courses from two of the following discipline areas: economics, history, political science, psychology, and sociology.

ECO 251 Principles of Microeconomics 3-0-3
ECO 252 Principles of Macroeconomics 3-0-3
HIS 111 World Civilizations I 3-0-3
HIS 112 World Civilizations II 3-0-3
HIS 131 American History I 3-0-3
HIS 132 American History II 3-0-3
POL 120 American Government 3-0-3
PSY 150 General Psychology 3-0-3
SOC 210 Introduction to Sociology 3-0-3

**D. Natural Sciences (8 SHC)**

Select a two-semester course sequence (strongly recommended) in general biology, general chemistry or general physics (a-d) or a pair of the one-semester course combinations listed below (e-j). All courses must have a lab component.

a. BIO 111 General Biology I 3-3-4
BIO 112 General Biology II 3-3-4

b. CHM 151 General Chemistry I 3-3-4
CHM 152 General Chemistry II 3-3-4

c. PHY 151 College Physics I 3-2-4
PHY 152 College Physics II 3-2-4

d. PHY 251 General Physics I 3-3-4
PHY 252 General Physics II 3-3-4

e. BIO 110 Principles of Biology 3-3-4
GEL 111 Introductory Geology 3-2-4

f. BIO 110 Principles of Biology 3-3-4
PHY 110 Conceptual Physics 3-0-3
PHY 110A Conceptual Physics Lab 0-2-1

g. GEL 111 Introductory Geology 3-2-4
PHY 110 Conceptual Physics 3-0-3
PHY 110A Conceptual Physics Lab 0-2-1

**E. Mathematics (8 SHC)**

Select two courses in mathematics.

MAT 171 Precalculus Algebra 3-2-4
MAT 172 Precalculus Trigonometry 3-2-4
MAT 263 Brief Calculus 3-2-4
MAT 271 Calculus I 3-2-4
MAT 272 Calculus II 3-2-4

**II. Additional General Education Hours (11 SHC)**

Select additional courses from UGETC courses listed above or from the courses classified as General Education courses in the NCCCS Combined Course Library. Students are advised to select courses based on intended major and senior institution.

ANT 210 General Anthropology 3-0-3
ASL 111 Elementary ASL 1 3-0-3
ASL 112 Elementary ASL II 3-0-3
ASL 211 Intermediate ASL I 3-0-3
ASL 212 Intermediate ASL II 3-0-3
BIO 140 Environmental Biology 3-0-3
BIO 140A Environmental Biology Lab 0-3-1
CHI 111 Elementary Chinese I 3-0-3
CHI 112 Elementary Chinese II 3-0-3
CHI 211 Intermediate Chinese I 3-0-3
CHI 212 Intermediate Chinese II 3-0-3
CHM 131 Introduction to Chemistry 3-0-3
CHM 131A Introduction to Chemistry Lab 0-3-1
CHM 132 Organic and Biochemistry 3-3-4
CIS 110 Introduction to Computers 2-2-3
CIS 115 Introduction to Programming and Logic 2-3-3
COM 110 Introduction to Communication 3-0-3
COM 140 Intro to Intercultural Communication 3-0-3
ECO 151 Survey of Economics 3-0-3
ENG 113 Literature-Based Research 3-0-3
ENG 114 Prof Research and Reporting 3-0-3
GEL 113 Historical Geology 3-2-4
FRE 111 Elementary French I 3-0-3
FRE 112 Elementary French II 3-0-3
FRE 211 Intermediate French I 3-0-3
FRE 212 Intermediate French II 3-0-3
GEL 230 Environmental Geology 3-2-4
HUM 110 Technology and Society 3-0-3
HUM 115 Critical Thinking 3-0-3
HUM 120 Cultural Studies 3-0-3
HUM 122 Southern Culture 3-0-3
HUM 150 American Women's Studies 3-0-3
MAT 143 Quantitative Literacy 2-2-3
MAT 152 Statistical Methods I 3-2-4
MAT 272 Calculus II 3-2-4
MAT 273 Calculus III 3-2-4
MUS 210 History of Rock Music 3-0-3
PSY 237 Social Psychology 3-0-3
PSY 241 Developmental Psychology 3-0-3
PSY 281 Abnormal Psychology 3-0-3
REL 110 World Religions 3-0-3
REL 211 Introduction to Old Testament 3-0-3
SOC 225 Social Diversity 3-0-3
SOC 240 Social Psychology 3-0-3
SPA 111 Elementary Spanish I 3-0-3
SPA 112 Elementary Spanish II 3-0-3
SPA 211 Intermediate Spanish I 3-0-3
SPA 212 Intermediate Spanish II 3-0-3

**III. Other Required Hours (15 SHC)**

In addition to ACA 122 (College Transfer Success) 14 SHC can be selected from the UGETC and General Education courses listed above and any courses classified Pre-Major/Elective (listed below) in the Comprehensive Articulation Agreement. Students are advised to select courses based on intended major and senior institution requirements. Students must meet the receiving university's foreign language, health and physical education requirements, if applicable, prior to or after transfer to the senior institution. Students need to complete two courses in foreign language in two semesters or more if a foreign language was not taken in high school.

ACC 120 Principles of Financial Accounting 3-2-4
ACC 121 Principles of Managerial Accounting 3-2-4
ART 121 Design I 0-6-3

ART 122 Design II 0-6-3
ART 131 Drawing I 0-6-3
ART 132 Drawing II 0-6-3
ART 214 Portfolio and Resume 0-2-1
ART 231 Printmaking I 0-6-3
ART 232 Printmaking II 0-6-3
ART 240 Painting I 0-6-3
ART 241 Painting II 0-6-3
ART 281 Sculpture I 0-6-3
ART 282 Sculpture II 0-6-3
ART 283 Ceramics I 0-6-3
ART 284 Ceramics II 0-6-3
BIO 150 Genetics in Human Affairs 3-0-3
BIO 155 Nutrition 3-0-3
BIO 163 Basic Anatomy and Physiology 4-2-
BIO 165 Anatomy and Physiology I 3-3-4
BIO 166 Anatomy and Physiology II 3-3-4
BIO 168 Anatomy and Physiology I 3-3-4
BIO 169 Anatomy and Physiology II 3-3-4
BIO 175 General Microbiology 2-2-3
BIO 180 Biological Chemistry 2-2-3
BIO 275 Microbiology 3-3-4
BUS 110 Introduction to Business 3-0-3
BUS 115 Business Law I 3-0-3
BUS 137 Principles of Management 3-0-3
CHM 130 General, Organic and Biochemistry 3-0-3
CHM 130A General, Organic, and Biochemistry Lab 0-2-1
CHM 251 Organic Chemistry I 3-3-4
CHM 252 Organic Chemistry II 3-3-4
CJC 111 Introduction to Criminal Justice 3-0-3
CJC 113 Juvenile Justice 3-0-3
CJC 121 Law Enforcement Operations 3-0-3
CJC 141 Corrections 3-0-3
CJC 212 Ethics & Comm Relations 3-0-3
COM 130 Nonverbal Communication 3-0-3
CSC 134 C++ Programming 2-3-3
CSC 139 Visual BASIC Programming 2-3-3
CSC 151 JAVA Programming 2-3-3
CTS 115 Info Sys Business Concepts 3-0-3
EGR 150 Intro to Engineering 1-2-2
EGR 220 Engineering Statics 3-0-3
ENG 125 Creative Writing I 3-0-3
ENG 126 Creative Writing II 3-0-3
HEA 110 Personal Health and Wellness 3-0-3
HIS 222 African-American History I 3-0-3
HIS 223 African-American History II 3-0-3
HIS 226 The Civil War 3-0-3
HIS 236 North Carolina History 3-0-3
MAT 280 Linear Algebra 2-2-3
MAT 285 Differential Equations 2-2-3
MSI 110 Military Science I 1-0-1
MSI 120 Military Science II 2-0-2
MSI 210 Military Science III 2-0-2
MSI 220 Military Science IV 2-0-2
MUS 111 Fundamentals of Music 3-0-3
PED 110 Fit and Well for Life 1-2-2
PED 113 Aerobics I 0-3-1
PED 114 Aerobics II 0-3-1
PED 115 Step Aerobics I 0-3-1
PED 117 Weight Training I 0-3-1
PED 118 Weight Training II 0-3-1
PED 119 Circuit Training 0-3-1
PED 121 Walk, Jog, Run 0-3-1
PED 122 Yoga I 0-2-1
PED 125 Self-Defense Beginning 0-2-1
PED 128 Golf-Beginning 0-2-1
PED 130 Tennis-Beginning 0-2-1
PED 137 Badminton 0-2-1
PED 139 Bowling-Beginning 0-2-1
PED 143 Volleyball-Beginning 0-2-1
PED 145 Basketball-Beginning 0-2-1
PED 149 Flag Football 0-2-1
PED 157 Pickleball 0-2-1
PED 171 Nature Hiking 0-2-1
PED 172 Outdoor Living 1-2-2
PED 217 Pilates I 0-2-1
PED 219 Disc Golf 0-2-1
PSY 246 Adolescent Psychology 3-0-3
SOC 232 Social Context of Aging 3-0-3
SPA 141 Culture and Civilization 3-0-3

# A1040T - Associate in Science in Teacher Preparation (ASTP)

## Overview

**Program Code**
A1040T

**Program Description**
The Associate in Science in Teacher Preparation degree shall be granted for a planned program of study consisting of a minimum of 60 semester hours of credit (SHC) of college transfer courses. Within the degree program, the institution shall include opportunities for the achievement of competence in reading, writing, oral communication, fundamental mathematical skills, and the basic computer use.

The Comprehensive Articulation Agreement (CAA) and the Independent Comprehensive Articulation Agreement (ICAA) enables North Carolina community college graduates of two-year associate in science programs who are admitted to constituent institutions of The University of North Carolina and to Signatory Institutions of North Carolina Independent Colleges and Universities to transfer with junior status.

Community college graduates must obtain a grade of "C" or better in each course and an overall GPA of at least 2.7 on a 4.0 scale in order to transfer with a junior status. Courses may also transfer through bilateral agreements between institutions.

**Career Pathway Options**
Associate in Science Degree, Baccalaureate Degree at a Senior Institution to enter a Teacher Education program

**Career Community**
Professional Services

**Program Length**
4 semesters

**Credential**
Associate in Science

## Program Outcomes

## Degree Maps

Associate in Science in Teacher Preparation
**Total Credits**
24

| Semester | Term | Term Credits |
|---|---|---|
| 1st Semester | Fall | 8 |

**Courses**
- ACA122 - College Transfer Success

**Term Credits** 1

**Courses**
- ENG111 - Writing and Inquiry

**Term Credits** 3

**Courses**
- EDU187 - Teaching and Learning for All

**Term Credits** 4

**Courses**
- Required Natural Science (Generic)

**Term Credits** -

**Courses**
- Required Social/Behavioral Science (Generic)

**Term Credits** -

| Semester | Term | Term Credits |
|---|---|---|
| 2nd Semester | Spring | 7 |

**Courses**
- ENG112 - Writing and Research in the Disciplines

**Term Credits** 3

**Courses**
- EDU279 - Literacy Development and Instruction

**Term Credits** 4

**Courses**
- Required Mathematics (Generic)

**Term Credits** -

**Courses**
- Required Humanities/Fine Arts/Communication (Generic)

**Term Credits** -

| Semester | Term | Term Credits |
|---|---|---|
| 3rd Semester | Fall | 3 |

**Courses**
- EDU216 - Foundations of Education

**Term Credits** 3

**Courses**
- Required Humanities/Fine Arts/Communication (Generic)

**Term Credits** -

**Courses**
- Required Mathematics (Generic)

**Term Credits** -

**Courses**
- Approved General Education course (Generic)

**Term Credits** -

**Courses**
- Approved General Education course (Generic)

**Term Credits** -

| Semester | Term | Term Credits |
|---|---|---|
| 4th Semester | Spring | 6 |

**Courses**
- SOC225 - Social Diversity

**Term Credits** 3

**Courses**
- EDU250 - Teacher Licensure Preparation

**Term Credits** 3

**Courses**
- Required Natural Science (Generic)

**Term Credits** -

**Courses**
- Approved General Education course (Generic)

**Term Credits** -

**Courses**
- Approved General Education course (Generic)

**Term Credits** -

## Program of Study

**Course Requirements for Associate in Science in Teacher Preparation:**

**I. General Education Requirements:**

**A. Composition (6 SHC) C-L-CR**

ENG 111 Writing & Inquiry 3-0-3
ENG 112 Writing/Research in the Disciplines 3-0-3

**B. Humanities/Fine Arts/Communication (9 SHC)**

Select 3 courses from the following from at least 2 different disciplines (9 SHC)

Communications:

COM 120 Intro to Interpersonal Communications 3-0-3
COM 231 Public Speaking 3-0-3

Humanities/Fine Arts:

ART 111 Art Appreciation 3-0-3
ART 114 Art History Survey I 3-0-3
ART 115 Art History Survey II 3-0-3
DRA 111 Theatre Appreciation 3-0-3
ENG 231 American Literature I 3-0-3
ENG 232 American Literature II 3-0-3
ENG 241 British Literature I 3-0-3
ENG 242 British Literature II 3-0-3
MUS 110 Music Appreciation 3-0-3
MUS 112 Introduction to Jazz 3-0-3
PHI 240 Introduction to Ethics 3-0-3

**C. Social/Behavioral Science**

Select 1 course from the following (3 SHC)

ECO 251 Principles of Microeconomics 3-0-3
ECO 252 Principles of Macroeconomics 3-0-3
HIS 111 World Civilizations I 3-0-3
HIS 112 World Civilizations II 3-0-3
HIS 131 American History I 3-0-3
HIS 132 American History II 3-0-3
POL 120 American Government 3-0-3
PSY 150 General Psychology 3-0-3
SOC 210 Introduction to Sociology 3-0-3

**D. Mathematics, take 2 courses (8 SHC)**

MAT 171 Precalculus Algebra 3-2-4
MAT 172 Precalculus Trigonometry 3-2-4
MAT 263 Brief Calculus 3-2-4
MAT 271 Calculus I 3-2-4
MAT 272 Calculus II 3-2-4

**E. Natural Sciences, take 2 sets (8 SHC)**

AST 151 General Astronomy I 3-0-3 &
AST 151A General Astronomy Lab 0-2-1

BIO 110 Principles of Biology 3-3-4

BIO 111 General Biology I 3-3-4
BIO 112 General Biology II 3-3-4

CHM 151 General Chemistry I 3-3-4
CHM 152 General Chemistry II 3-3-4

GEL 111 Introductory Geology 3-2-4

PHY 110 Conceptual Physics 3-0-3 &
PHY 110A Conceptual Physics Lab 0-2-1

PHY 151 College Physics 3-2-4
PHY 152 College Physics II 3-2-4

PHY 251 General Physics I 3-3-4
PHY 252 General Physics II 3-3-4

**F. Required General Education**

SOC 225 Social Diversity 3-0-3

**II. An additional 11-12 SHC of UGETC courses or General Education classes:**

ANT 210 General Anthropology 3-0-3
ASL 111 Elementary ASL 1 3-0-3
ASL 112 Elementary ASL II 3-0-3
ASL 211 Intermediate ASL I 3-0-3
ASL 212 Intermediate ASL II 3-0-3
BIO 140 Environmental Biology 3-0-3
BIO 140A Environmental Biology Lab 0-3-1
CHI 111 Elementary Chinese I 3-0-3
CHI 112 Elementary Chinese II 3-0-3
CHI 211 Intermediate Chinese I 3-0-3
CHI 212 Intermediate Chinese II 3-0-3
CHM 131 Introduction to Chemistry 3-0-3
CHM 131A Introduction to Chemistry Lab 0-3-1
CHM 132 Organic and Biochemistry 3-3-4
CIS 110 Introduction to Computers 2-2-3
CIS 115 Introduction to Programming and Logic 2-3-3
COM 110 Introduction to Communication 3-0-3
COM 140 Intro to Intercultural Communication 3-0-3
ECO 151 Survey of Economics 3-0-3
ENG 113 Literature-Based Research 3-0-3
ENG 114 Prof Research and Reporting 3-0-3
GEL 113 Historical Geology 3-2-4
FRE 111 Elementary French I 3-0-3
FRE 112 Elementary French II 3-0-3
FRE 211 Intermediate French I 3-0-3
FRE 212 Intermediate French II 3-0-3
GEL 230 Environmental Geology 3-2-4
HUM 110 Technology and Society 3-0-3
HUM 115 Critical Thinking 3-0-3
HUM 120 Cultural Studies 3-0-3
HUM 122 Southern Culture 3-0-3
HUM 150 American Women's Studies 3-0-3
MAT 143 Quantitative Literacy 2-2-3
MAT 152 Statistical Methods I 3-2-4
MAT 272 Calculus II 3-2-4
MAT 273 Calculus III 3-2-4
MUS 210 History of Rock Music 3-0-3
PSY 237 Social Psychology 3-0-3
PSY 241 Developmental Psychology 3-0-3
PSY 281 Abnormal Psychology 3-0-3
REL 110 World Religions 3-0-3
REL 211 Introduction to Old Testament 3-0-3
SOC 225 Social Diversity 3-0-3
SOC 240 Social Psychology 3-0-3
SPA 111 Elementary Spanish I 3-0-3
SPA 112 Elementary Spanish II 3-0-3
SPA 211 Intermediate Spanish I 3-0-3
SPA 212 Intermediate Spanish II 3-0-3

**III. Other required (14 SHC):**

EDU 187 Teaching and Learning for All 3-3-4
EDU 216 Foundations of Education 3-0-3
EDU 279 Literacy Development & Instruction 3-3-4
EDU 250 Teacher Licensure Preparation 3-0-3

**IV. Required ACA (1 SHC):**

ACA 122 College Transfer Success 0-2-1

# A10500 - Associate in Engineering

## Overview

**Program Code**
A10500

**Program Description**
The Associate in Engineering (AE) degree shall be granted for a planned program of study consisting of a minimum of 60 semester hours of credit (SHC) of courses. Within the degree program, the institution shall include opportunities for the achievement of competence in reading, writing, oral communication, fundamental mathematical skills, and basic computer use.

The degree plan includes required general education and prerequisite courses that are acceptable to all state funded Bachelor of Engineering programs. Students who follow the degree progression plan will meet the entrance requirements at all of the North Carolina public Bachelor of Science Engineering programs. Associate in Engineering graduates may then apply to any of these programs without taking additional and sometimes duplicative courses. Admission to Engineering programs

is highly competitive and admission is not guaranteed.

To be eligible for the transfer of credits under the AE to the Bachelor of Science in Engineering Articulation Agreement, community college graduates must obtain a grade of "C" or better in each course and an overall GPA of at least 2.5 on a 4.0 scale.

GENERAL EDUCATION (42 SHC) The general education common course pathway includes study in the areas of English composition; humanities and fine arts; social and behavioral sciences; natural sciences and mathematics. UNIVERSAL GENERAL EDUCATION TRANSFER COMPONENT (Universal General Education Transfer Component (UGETC) courses will transfer for equivalency credit to all UNC institutions.) *Exceptions (i.e. courses which are not classified as UGETC) are italicized.

**Career Pathway Options**
Associate in Engineering Degree, Baccalaureate in Engineering Degree at a Senior Institution

**Career Community**
STEM

**Program Length**
4 semesters

**Credential**
Associate in Engineering

## Program Outcomes

## Degree Maps

Associate in Engineering
**Total Credits**
39

| Semester | Term | Term Credits |
|---|---|---|
| 1st Semester | Fall | 13 |

**Courses**
- ACA122 - College Transfer Success

**Term Credits** 1

**Courses**
- ENG111 - Writing and Inquiry

**Term Credits** 3

**Courses**
- CHM151 - General Chemistry I

**Term Credits** 4

**Courses**
- ECO251 - Principles of Microeconomics

**Term Credits** 3

**Courses**
- EGR150 - Introduction to Engineering

**Term Credits** 2

**Courses**
- MAT 271 prerequisite or Humanities course (Generic)

**Term Credits** -

| Semester | Term | Term Credits |
|---|---|---|
| 2nd Semester | Spring | 7 |

**Courses**
- ENG112 - Writing and Research in the Disciplines

**Term Credits** 3

**Courses**
- MAT271 - Calculus I

**Term Credits** 4

**Courses**
- Fine Arts/Communications (Generic)

**Term Credits** -

**Courses**
- Required Social/Behavioral Science Course (Generic)

**Term Credits** -

**Courses**
- Pre-major elective (Generic)

**Term Credits** -

| Semester | Term | Term Credits |
|---|---|---|
| 3rd Semester | Fall | 8 |

**Courses**
- MAT272 - Calculus II

**Term Credits** 4

**Courses**
- PHY251 - General Physics I

**Term Credits** 4

**Courses**
- Pre-major Elective (Generic)

**Term Credits** -

**Courses**
- Pre-major Elective (Generic)

**Term Credits** -

| Semester | Term | Term Credits |
|---|---|---|
| 4th Semester | Spring | 11 |

**Courses**
- MAT273 - Calculus III

**Term Credits** 4

**Courses**
- PHY252 - General Physics II

**Term Credits** 4

**Courses**
- MAT285 - Differential Equations

**Term Credits** 3

**Courses**
-

**Term Credits** -

**Courses**
- Pre-major Elective (Generic)

**Term Credits** -

## Program of Study

**Course Requirements for Associate in Engineering Degree**

**I. Universal General Education Transfer Component (UGETC) 42 SHC**

**A. Composition, take both (6 SHC) C-L-CR**

ENG 111 Writing and Inquiry 3-0-3
ENG 112 Writing and Research in the Disciplines 3-0-3

**B. Humanities, select one (3 SHC)**

ENG 231 American Literature I 3-0-3
ENG 232 American Literature II 3-0-3
ENG 241 British Literature I 3-0-3
ENG 242 British Literature II 3-0-3
PHI 240 Introduction to Ethics 3-0-3
REL 110 World Religions 3-0-3

*(REL 110 will transfer for equivalency credit to the engineering programs at all six UNC institutions that offer undergraduate engineering programs. It may not transfer with equivalency to other programs).*

**C. Humanities/Fine Arts, select one (3 SHC)**

Select a course from the following discipline areas: art, communications, music.

ART 111 Art Appreciation 3-0-3
ART 114 Art History Survey I 3-0-3
ART 115 Art History Survey II 3-0-3
COM 231 Public Speaking 3-0-3
MUS 110 Music Appreciation 3-0-3
MUS 112 Introduction to Jazz 3-0-3

**D. Social and Behavioral Sciences (6 SHC)**

One required course, choose one additional course.

Required:

ECO 251 Principles of Microeconomics 3-0-3

One additional course:

HIS 111 World Civilizations I 3-0-3
HIS 112 World Civilizations II 3-0-3
HIS 131 American History I 3-0-3
HIS 132 American History II 3-0-3
POL 120 American Government 3-0-3
PSY 150 General Psychology 3-0-3
SOC 210 Introduction to Sociology 3-0-3

**E. Natural Sciences (12 SHC)**

CHM 151 General Chemistry I 3-3-4
PHY 251 General Physics I 3-3-4
PHY 252 General Physics II 3-3-4

**F. Mathematics (12 SHC)**

MAT 271 Calculus I 3-2-4
MAT 272 Calculus II 3-2-4
MAT 273 Calculus III 3-2-4

*Calculus I is the lowest math course that will be accepted by engineering programs for transfer as a math credit. Students who are not calculus-ready will need to take additional math courses.* ***Students are recommended to include both the Associate in Science and the Associate in Engineering as their declared programs of study.***

**II. Additional General Education Hours/Pre-Major Electives (18 SHC)**

Three required courses, choose additional courses. At least two credit hours must be from PED.

ACA 122 College Transfer Success 1-0-1
EGR 150 Introduction to Engineering 1-2-2
MAT 285 Differential Equations 2-2-3

Select additional courses from UGETC courses listed above or from the courses classified as General Education courses in the NCCCS Combined Course Library. (12 SHC)

Take 3 credits from:

BIO 111 General Biology I 3-3-4
COM 110 Introduction to Communication 3-0-3
COM 231 Public Speaking 3-0-3
CHM 152 General Chemistry II 3-3-4
ECO 252 Principles of Macroeconomics 3-0-3
GEL 111 Introductory Geology 3-2-4
HUM 110 Technology and Society 3-0-3
PHI 240 Introduction to Ethics 3-0-3

Take 9 credits from:

BIO 111 General Biology I 3-3-4
CHM 152 General Chemistry II 3-3-4
CHM 251 Organic Chemistry I 3-3-4
CHM 252 Organic Chemistry II 3-3-4
COM 110 Introduction to Communication 3-0-3
COM 231 Public Speaking 3-0-3
CSC 134 C++ Programming 2-3-3
CSC 151 JAVA Programming 2-3-3
DFT 170 Engineering Graphics 2-2-3
ECO 252 Principles of Macroeconomics 3-0-3
EGR 210 Intro to Electr./Computer Eng. Lab 1-3-2
EGR 212 Logic System Design I 3-0-3
EGR 214 Num Methods for Engineers 3-0-3
EGR 215 Network Theory I 3-0-3
EGR 216 Logic and Network Lab 0-3-1
EGR 220 Engineering Statics 3-0-3
EGR 225 Engineering Dynamics 3-0-3
EGR 228 Introduction to Solid Mechanics 3-0-3
GEL 111 Introductory Geology 3-2-4
HUM 110 Technology and Society 3-0-3
MAT 280 Linear Algebra 2-2-3
PED 110 Fit and Well for Life 1-2-2

# A15410 - Sustainable Agriculture AAS

## Overview

**Program Code**
A15410

**Program Description**
Pathway Description: These curriculums are designed to provide the entrepreneurial and technical skills necessary to manage a profitable, environmentally sound, community based small farm or agricultural business. The objective is the development of a workforce knowledgeable in sustainable agriculture practices. Students will learn the fundamentals of agriculture, focusing on crop production and business. Emphasis is placed on entrepreneurial and field training. Students will also learn the basic principles of our economic system and government policies and programs relating to agriculture. Graduates should qualify for a variety of jobs in agricultural businesses such as equipment, feed, and agricultural supply sales; store management; farm operations; wholesale and retail produce management; nursery operations; and environmental and agricultural education.

Sustainable Agriculture: A program that focuses on agricultural principles and practices that, over the long term, enhance environmental quality, make efficient use of nonrenewable resources, integrate natural biological cycles and controls, and are economically viable and socially responsible; and that may prepare individuals to apply this knowledge to the solution of agricultural and environmental problems. Potential course work includes instruction in principles of agroecology, crop and soil sciences, entomology, horticulture, animal science, weed science and management, soil fertility and nutrient cycling, applied ecology, agricultural economics, and rangeland ecology and watershed management.

**Career Pathway Options**
Associate in Applied Science in Sustainable Agriculture

**Career Community**
STEM

**Program Length**
5 semesters

**Credential**
Associate in Applied Science

## Program Outcomes

## Degree Maps

Sustainable Agriculture Associate in Applied Science

**Total Credits**
64

| Semester | Term | Term Credits |
|---|---|---|
| 1st Semester | Fall | 17 |

**Courses**
- AGR139 - Introduction to Sustainable Agriculture

**Term Credits** 3

**Courses**
- AGR170 - Soil Science

**Term Credits** 3

**Courses**
- ANS110 - Animal Science

**Term Credits** 3

**Courses**
- CIS111 - Basic PC Literacy

**Term Credits** 2

**Courses**
- Social/Behavioral Science Elective (Generic)

**Term Credits** 3

**Courses**
- ACA122 - College Transfer Success

**Term Credits** 1

**Courses**
- AGR111 - Basic Farm Maintenance

**Term Credits** 2

| Semester | Term | Term Credits |
|---|---|---|
| 2nd Semester | Spring | 15 |

**Courses**
- AGR121 - Biological Pest Management

**Term Credits** 3

**Courses**
- AGR160 - Plant Science

**Term Credits** 3

**Courses**
- ANS111 - Sustainable Livestock Management

**Term Credits** 3

**Courses**
- ENG111 - Writing and Inquiry

**Term Credits** 3

**Courses**
- HOR130 - Greenhouse Design
  **OR**
- AGR221 - Farm Structures
  **OR**
- AGR110 - Agricultural Economics

**Term Credits** 3

**Courses**
- Humanities/Fine Arts Elective (Generic)

**Term Credits** -

| Semester | Term | Term Credits |
|---|---|---|

| 3rd Semester | Summer | 1 |
|---|---|---|

**Courses**
- WBL111 - Work-Based Learning I

**Term Credits** 1

| Semester | Term | Term Credits |
|---|---|---|
| 4th Semester | Fall | 18 |

**Courses**
- AGR214 - Agricultural Marketing

**Term Credits** 3

**Courses**
- AGR220 - Agricultural Mechanization

**Term Credits** 3

**Courses**
- AGR267 - Permaculture

**Term Credits** 3

**Courses**
- HOR168 - Plant Propagation

**Term Credits** 3

**Courses**
- ENG112 - Writing and Research in the Disciplines
  **OR**
- ENG114 - Professional Research & Reporting
  **OR**
- COM110 - Introduction to Communication

**Term Credits** 3

**Courses**
- AGR265 - Organic Crop Production: Spring
  **OR**
- AGR266 - Organic Crop Production: Fall

**Term Credits** 3

| Semester | Term | Term Credits |
|---|---|---|
| 5th Semester | Spring | 13 |

**Courses**
- AGR212 - Farm Business Management

**Term Credits** 3

**Courses**
- AGR268 - Advanced Organic Crop Production

**Term Credits** 4

**Courses**
- BUS110 - Introduction to Business
  **OR**
- BUS230 - Small Business Management

**Term Credits** 3

**Courses**
- MAT110 - Mathematical Measurement and Literacy
  **OR**
- MAT143 - Quantitative Literacy

**Term Credits** 3

## Approved AAS Electives

**Approved AAS Electives (C-L-SHC)**

# Approved Electives for the Associate in Applied Science Degree and Diploma

C-L-SHC

| APPROVED HUMANITIES/FINE ARTS ELECTIVES | APPROVED SOCIAL/BEHAVIORAL SCIENCE ELECTIVES |
|---|---|
| ART 111 Art Appreciation 3-0-3 | ANT 210 General Anthropology 3-0-3 |
| ART 114 Art History Survey I 3-0-3 | ANT 220 Cultural Anthropology 3-0-3 |
| ART 115 Art History Survey II 3-0-3 | ECO 151 Survey of Economics 3-0-3 |
| DRA 111 Theatre Appreciation 3-0-3 | ECO 251 Principles of Microeconomics 3-0-3 |
| ENG 125 Creative Writing I 3-0-3 | ECO 252 Principles of Macroeconomics 3-0-3 |
| ENG 231 American Literature I 3-0-3 | HIS 111 World Civilization I 3-0-3 |
| ENG 232 American Literature II 3-0-3 | HIS 112 World Civilization II 3-0-3 |
| *ENG 241 British Literature I 3-0-3 | HIS 131 American History I 3-0-3 |
| *ENG 242 British Literature II 3-0-3 | HIS 132 American History II 3-0-3 |
| HUM 110 Technology and Society 3-0-3 | HIS 222 African-American History I 3-0-3 |
| HUM 115 Critical Thinking 3-0-3 | HIS 223 African-American History II 3-0-3 |
| HUM 120 Cultural Studies 3-0-3 | HIS 226 The Civil War 3-0-3 |
| HUM 122 Southern Culture 3-0-3 | HIS 236 North Carolina History 3-0-3 |
| HUM 150 American Women's Studies 3-0-3 | POL 120 American Government 3-0-3 |
| HUM 160 Introduction to Film 2-2-3 | PSY 150 General Psychology 3-0-3 |
| MUS 110 Music Appreciation 3-0-3 | PSY 237 Social Psychology 3-0-3 |
| MUS 112 Introduction to Jazz 3-0-3 | PSY 241 Developmental Psychology 3-0-3 |
| PHI 240 Introduction to Ethics 3-0-3 | PSY 246 Adolescent Psychology 3-0-3 |
| REL 110 World Religions 3-0-3 | PSY 281 Abnormal Psychology 3-0-3 |
| REL 211 Intro to Old Testament 3-0-3 | SOC 210 Introduction to Sociology 3-0-3 |
| REL 212 Intro to New Testament 3-0-3 | SOC 213 Sociology of the Family 3-0-3 |
| | SOC 220 Social Problems 3-0-3 |
| | SOC 225 Social Diversity 3-0-3 |
| | SOC 232 Social Context of Aging 3-0-3 |
| *Not applicable for some health sciences programs.* | SOC 240 Social Psychology3-0-3 |

# A20100 - Biotechnology Bioprocess Manufacturing Technology AAS

## Overview

**Program Code**
A20100

**Program Description**
This curriculum prepares individuals to apply scientific principles and technical skills in support of biologists and biotechnologists in research, industrial, and government settings.

Coursework, most of which is hands-on, includes topics such as fermentation technology, cell culturing, protein purification, biologic synthesis, assaying and testing, quality control, industrial microbiology, bioprocessing, chromatography and bioseparation, genetic technology, laboratory and hazardous materials safety, and computer applications

Graduates should be qualified for employment in various biotechnology-related laboratory and manufacturing areas of industry and government, including research and development, QA, QC, process technicians, sales, and customer service.

**Career Pathway Options**
Associate in Applied Science in Bioprocess Technology

**Career Community**
Applied Technologies

**Program Length**
5 semesters

**Credential**
Associate in Applied Science

## Program Outcomes

## Degree Maps

Biotechnology - Bioprocess Manufacturing Technology, Associate in Applied Science

**Total Credits**
67

| Semester | Term | Term Credits |
|---|---|---|
| 1st Semester | Fall | 16 |

**Courses**
- ACA122 - College Transfer Success

**Term Credits** 1

**Courses**
- BPM110 - Bioprocess Practices

**Term Credits** 5

**Courses**
- BIO110 - Principles of Biology

**Term Credits** 4

**Courses**
- PTC110 - Industrial Environment

**Term Credits** 3

**Courses**
- ENG111 - Writing and Inquiry

**Term Credits** 3

| Semester | Term | Term Credits |
|---|---|---|
| 2nd Semester | Spring | 13 |

**Courses**
- BIO175 - General Microbiology

**Term Credits** 3

**Courses**
- BPM111 - Bioprocess Measurements

**Term Credits** 4

**Courses**
- CIS110 - Introduction to Computers

**Term Credits** 3

**Courses**
- MAT121 - Algebra/Trigonometry I

**OR**
- MAT171 - Precalculus Algebra

**Term Credits** 3

| Semester | Term | Term Credits |
|---|---|---|
| 3rd Semester | Summer | 7 |

**Courses**
- ISC121 - Environmental Health & Safety

**Term Credits** 3

**Courses**
- ISC175 - QA Fundamentals

**Term Credits** 1

**Courses**
- ENG112 - Writing and Research in the Disciplines

**Term Credits** 3

| Semester | Term | Term Credits |
|---|---|---|
| 4th Semester | Fall | 17 |

**Courses**
- CHM131 - Introduction to Chemistry

**Term Credits** 3

**Courses**
- CHM131A - Introduction to Chemistry Lab

**Term Credits** 1

**Courses**
- BPM112 - Upstream Processing

**Term Credits** 5

**Courses**
- ISC278 - cGMP Quality Systems

**Term Credits** 2

**Courses**
- PTE116 - Pathway to Employment - Biological and Chemical

**Term Credits** 3

**Courses**
- Communications Elective (Generic)

**Term Credits** 3

| Semester | Term | Term Credits |
|---|---|---|
| 5th Semester | Spring | 14 |

**Courses**
- BPM113 - Downstream Bioprocessing

**Term Credits** 4

**Courses**
- PTC228 - Pharmaceutical Issues

**Term Credits** 1

**Courses**
- ISC280 - Validation Fundamentals

**Term Credits** 2

**Courses**
- WBL111 - Work-Based Learning I

**Term Credits** 1

**Courses**
- Humanities/Fine Arts Elective (Generic)

**Term Credits** 3

**Courses**
- Social/Behavioral Science Elective (Generic)

**Term Credits** 3

## Approved AAS Electives

**Approved AAS Electives (C-L-SHC)**

# Approved Electives for the Associate in Applied Science Degree and Diploma

C-L-SHC

| APPROVED HUMANITIES/FINE ARTS ELECTIVES | APPROVED SOCIAL/BEHAVIORAL SCIENCE ELECTIVES |
|---|---|
| ART 111 Art Appreciation 3-0-3 | ANT 210 General Anthropology 3-0-3 |
| ART 114 Art History Survey I 3-0-3 | ANT 220 Cultural Anthropology 3-0-3 |
| ART 115 Art History Survey II 3-0-3 | ECO 151 Survey of Economics 3-0-3 |
| DRA 111 Theatre Appreciation 3-0-3 | ECO 251 Principles of Microeconomics 3-0-3 |
| ENG 125 Creative Writing I 3-0-3 | ECO 252 Principles of Macroeconomics 3-0-3 |
| ENG 231 American Literature I 3-0-3 | HIS 111 World Civilization I 3-0-3 |
| ENG 232 American Literature II 3-0-3 | HIS 112 World Civilization II 3-0-3 |
| *ENG 241 British Literature I 3-0-3 | HIS 131 American History I 3-0-3 |
| *ENG 242 British Literature II 3-0-3 | HIS 132 American History II 3-0-3 |
| HUM 110 Technology and Society 3-0-3 | HIS 222 African-American History I 3-0-3 |
| HUM 115 Critical Thinking 3-0-3 | HIS 223 African-American History II 3-0-3 |
| HUM 120 Cultural Studies 3-0-3 | HIS 226 The Civil War 3-0-3 |
| HUM 122 Southern Culture 3-0-3 | HIS 236 North Carolina History 3-0-3 |
| HUM 150 American Women's Studies 3-0-3 | POL 120 American Government 3-0-3 |
| HUM 160 Introduction to Film 2-2-3 | PSY 150 General Psychology 3-0-3 |
| MUS 110 Music Appreciation 3-0-3 | PSY 237 Social Psychology 3-0-3 |
| MUS 112 Introduction to Jazz 3-0-3 | PSY 241 Developmental Psychology 3-0-3 |
| PHI 240 Introduction to Ethics 3-0-3 | PSY 246 Adolescent Psychology 3-0-3 |
| REL 110 World Religions 3-0-3 | PSY 281 Abnormal Psychology 3-0-3 |
| REL 211 Intro to Old Testament 3-0-3 | SOC 210 Introduction to Sociology 3-0-3 |
| REL 212 Intro to New Testament 3-0-3 | SOC 213 Sociology of the Family 3-0-3 |
| | SOC 220 Social Problems 3-0-3 |
| | SOC 225 Social Diversity 3-0-3 |
| | SOC 232 Social Context of Aging 3-0-3 |
| *Not applicable for some health sciences programs.* | SOC 240 Social Psychology 3-0-3 |

# A25120G - Business Administration General Track AAS

## Overview

**Program Code**
A25120G

**Career Pathway Options**
Associate in Applied Science Degree in Business Administration

**Career Community**
Business Technologies

**Program Length**
5 semesters

**Credential**
Associate in Applied Science

## Program Outcomes

## Degree Maps

Business Administration General Track, Associate in Applied Science
**Total Credits**
64

| Semester | Term | Term Credits |
|---|---|---|
| 1st Semester | Fall | 14 |

**Courses**
- ACC120 - Principles of Financial Accounting

**Term Credits** 4

**Courses**
- BUS110 - Introduction to Business

**Term Credits** 3

**Courses**
- BUS125 - Personal Finance

**Term Credits** 3

**Courses**
- ENG111 - Writing and Inquiry

**Term Credits** 3

**Courses**
- ACA122 - College Transfer Success

**Term Credits** 1

| Semester | Term | Term Credits |
|---|---|---|
| 2nd Semester | Spring | 16 |

**Courses**
- ACC121 - Principles of Managerial Accounting

**Term Credits** 4

**Courses**
- BUS137 - Principles of Management

**Term Credits** 3

**Courses**
- ENG114 - Professional Research & Reporting

**Term Credits** 3

**Courses**
- MKT120 - Principles of Marketing

**Term Credits** 3

**Courses**
- Economics Requirement (Generic)

**Term Credits** 3

| Semester | Term | Term Credits |
|---|---|---|
| 3rd Semester | Summer | 6 |

**Courses**
- CIS110 - Introduction to Computers

**Term Credits** 3

**Courses**
- MAT110 - Mathematical Measurement and Literacy

**OR**
- MAT143 - Quantitative Literacy

**Term Credits** 3

| Semester | Term | Term Credits |
|---|---|---|
| 4th Semester | Fall | 15 |

**Courses**
- BUS115 - Business Law I

**Term Credits** 3

**Courses**
- BUS225 - Business Finance

**Term Credits** 3

**Courses**
- BUS240 - Business Ethics

**Term Credits** 3

**Courses**
- Humanities/Fine Arts requirement (Generic)

**Term Credits** 3

**Courses**
- Major Elective (Generic)

**Term Credits** 3

| Semester | Term | Term Credits |
|---|---|---|
| 5th Semester | Spring | 13 |

**Courses**
- BUS153 - Human Resource Management

**Term Credits** 3

**Courses**
- BUS260 - Business Communication

**Term Credits** 3

**Courses**
- MKT223 - Customer Experience

**Term Credits** 3

**Courses**
- WBL111 - Work-Based Learning I

**Term Credits** 1

**Courses**
- Social/Behavioral Science requirement (Generic)

**Term Credits** 3

## Approved AAS Electives

**Approved AAS Electives (C-L-SHC)**

| APPROVED HUMANITIES/FINE ARTS ELECTIVES | APPROVED SOCIAL/BEHAVIORAL SCIENCE ELECTIVES |
|---|---|
| ART 111 Art Appreciation 3-0-3 | ANT 210 General Anthropology 3-0-3 |
| ART 114 Art History Survey I 3-0-3 | ANT 220 Cultural Anthropology 3-0-3 |
| ART 115 Art History Survey II 3-0-3 | ECO 151 Survey of Economics 3-0-3 |
| DRA 111 Theatre Appreciation 3-0-3 | ECO 251 Principles of Microeconomics 3-0-3 |
| ENG 125 Creative Writing I 3-0-3 | ECO 252 Principles of Macroeconomics 3-0-3 |
| ENG 231 American Literature I 3-0-3 | HIS 111 World Civilization I 3-0-3 |
| ENG 232 American Literature II 3-0-3 | HIS 112 World Civilization II 3-0-3 |
| *ENG 241 British Literature I 3-0-3 | HIS 131 American History I 3-0-3 |
| *ENG 242 British Literature II 3-0-3 | HIS 132 American History II 3-0-3 |
| HUM 110 Technology and Society 3-0-3 | HIS 222 African-American History I 3-0-3 |
| HUM 115 Critical Thinking 3-0-3 | HIS 223 African-American History II 3-0-3 |
| HUM 120 Cultural Studies 3-0-3 | HIS 226 The Civil War 3-0-3 |
| HUM 122 Southern Culture 3-0-3 | HIS 236 North Carolina History 3-0-3 |
| HUM 150 American Women's Studies 3-0-3 | POL 120 American Government 3-0-3 |
| HUM 160 Introduction to Film 2-2-3 | PSY 150 General Psychology 3-0-3 |
| MUS 110 Music Appreciation 3-0-3 | PSY 237 Social Psychology 3-0-3 |
| MUS 112 Introduction to Jazz 3-0-3 | PSY 241 Developmental Psychology 3-0-3 |
| PHI 240 Introduction to Ethics 3-0-3 | PSY 246 Adolescent Psychology 3-0-3 |
| REL 110 World Religions 3-0-3 | PSY 281 Abnormal Psychology 3-0-3 |
| REL 211 Intro to Old Testament 3-0-3 | SOC 210 Introduction to Sociology 3-0-3 |
| REL 212 Intro to New Testament 3-0-3 | SOC 213 Sociology of the Family 3-0-3 |
| | SOC 220 Social Problems 3-0-3 |
| | SOC 225 Social Diversity 3-0-3 |
| | SOC 232 Social Context of Aging 3-0-3 |
| *Not applicable for some health sciences programs.* | SOC 240 Social Psychology3-0-3 |

# A25120H - Business Administration Human Resource Track AAS

## Overview

**Program Code**
A25120H

**Program Description**
The Business Administration curriculum is designed to introduce students to the various aspects of the free enterprise system. Students will be 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, 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 will have 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.

**Career Pathway Options**
Associate in Applied Science Degree in Business Administration

**Career Community**
Business Technologies

**Program Length**
5 semesters

**Credential**
Associate in Applied Science

## Program Outcomes

## Degree Maps

Business Administration, Human Resource Management Track, Associate in Applied Science

**Total Credits**
66

| Semester | Term | Term Credits |
|---|---|---|
| 1st Semester | Fall | 16 |

**Courses**
- BUS110 - Introduction to Business

**Term Credits** 3

**Courses**
- BUS115 - Business Law I

**Term Credits** 3

**Courses**
- BUS153 - Human Resource Management

**Term Credits** 3

**Courses**
- CIS110 - Introduction to Computers

**Term Credits** 3

**Courses**
- ENG111 - Writing and Inquiry

**Term Credits** 3

**Courses**
- ACA122 - College Transfer Success

**Term Credits** 1

| Semester | Term | Term Credits |
|---|---|---|
| 2nd Semester | Spring | 16 |

**Courses**
- ACC120 - Principles of Financial Accounting

**Term Credits** 4

**Courses**
- BUS217 - Employment Law and Regulations

**Term Credits** 3

**Courses**
- BUS261 - Diversity in Management

**Term Credits** 3

**Courses**
- MAT110 - Mathematical Measurement and Literacy

**OR**
- MAT143 - Quantitative Literacy

**Term Credits** 3

**Courses**
- Social/Behavioral Science requirement (Generic)

**Term Credits** 3

| Semester | Term | Term Credits |
|---|---|---|
| 3rd Semester | Summer | 6 |

**Courses**
- BUS137 - Principles of Management

**Term Credits** 3

**Courses**
- Economics requirement (Generic)

**Term Credits** 3

| Semester | Term | Term Credits |
|---|---|---|
| 4th Semester | Fall | 15 |

**Courses**
- BUS234 - Training and Development

**Term Credits** 3

**Courses**
- BUS256 - Recruiting, Selection, & Personnel Planning

**Term Credits** 3

**Courses**
- BUS258 - Compensation and Benefits

**Term Credits** 3

**Courses**
- ENG114 - Professional Research & Reporting

**Term Credits** 3

**Courses**
- Humanities//Fine Arts requirement (Generic)

**Term Credits** 3

| Semester | Term | Term Credits |
|---|---|---|
| 5th Semester | Spring | 13 |

**Courses**
- BUS252 - Labor Relations

**Term Credits** 3

**Courses**
- BUS259 - Human Resource Management Applications

**Term Credits** 3

**Courses**
- MKT120 - Principles of Marketing

**Term Credits** 3

**Courses**
- WBL111 - Work-Based Learning I

**Term Credits** 1

**Courses**
- Major Elective (Generic)

**Term Credits** 3

## Approved AAS Electives

**Approved AAS Electives (C-L-SHC)**

| APPROVED HUMANITIES/FINE ARTS ELECTIVES | APPROVED SOCIAL/BEHAVIORAL SCIENCE ELECTIVES |
|---|---|
| ART 111 Art Appreciation 3-0-3 | ANT 210 General Anthropology 3-0-3 |
| ART 114 Art History Survey I 3-0-3 | ANT 220 Cultural Anthropology 3-0-3 |
| ART 115 Art History Survey II 3-0-3 | ECO 151 Survey of Economics 3-0-3 |
| DRA 111 Theatre Appreciation 3-0-3 | ECO 251 Principles of Microeconomics 3-0-3 |
| ENG 125 Creative Writing I 3-0-3 | ECO 252 Principles of Macroeconomics 3-0-3 |
| ENG 231 American Literature I 3-0-3 | HIS 111 World Civilization I 3-0-3 |
| ENG 232 American Literature II 3-0-3 | HIS 112 World Civilization II 3-0-3 |
| *ENG 241 British Literature I 3-0-3 | HIS 131 American History I 3-0-3 |
| *ENG 242 British Literature II 3-0-3 | HIS 132 American History II 3-0-3 |
| HUM 110 Technology and Society 3-0-3 | HIS 222 African-American History I 3-0-3 |
| HUM 115 Critical Thinking 3-0-3 | HIS 223 African-American History II 3-0-3 |
| HUM 120 Cultural Studies 3-0-3 | HIS 226 The Civil War 3-0-3 |
| HUM 122 Southern Culture 3-0-3 | HIS 236 North Carolina History 3-0-3 |
| HUM 150 American Women's Studies 3-0-3 | POL 120 American Government 3-0-3 |
| HUM 160 Introduction to Film 2-2-3 | PSY 150 General Psychology 3-0-3 |
| MUS 110 Music Appreciation 3-0-3 | PSY 237 Social Psychology 3-0-3 |
| MUS 112 Introduction to Jazz 3-0-3 | PSY 241 Developmental Psychology 3-0-3 |
| PHI 240 Introduction to Ethics 3-0-3 | PSY 246 Adolescent Psychology 3-0-3 |
| REL 110 World Religions 3-0-3 | PSY 281 Abnormal Psychology 3-0-3 |
| REL 211 Intro to Old Testament 3-0-3 | SOC 210 Introduction to Sociology 3-0-3 |
| REL 212 Intro to New Testament 3-0-3 | SOC 213 Sociology of the Family 3-0-3 |
| | SOC 220 Social Problems 3-0-3 |
| | SOC 225 Social Diversity 3-0-3 |
| | SOC 232 Social Context of Aging 3-0-3 |
| *Not applicable for some health sciences programs.* | SOC 240 Social Psychology3-0-3 |

# A25310 - Medical Office Administration AAS

## Overview

**Program Code**
A25310

**Program Description**
The Medical Office Administration curriculum prepares individuals for employment as medical administrative personnel in the areas of medical office, medical billing and coding, dental office, patient services, and medical documents.

Course work includes medical terminology, computer applications, medical office management, medical coding, medical insurance and billing, medical legal and ethical issues, oral and written communication, and other topics depending on the subject area selected within this curriculum.

Graduates should qualify for employment opportunities in a variety of medical office positions in medical and dental offices, hospitals, insurance companies, laboratories, medical supply companies, and other healthcare related organizations. Upon graduation, students may be eligible to sit for industry recognized certification exams.

**Career Pathway Options**
Associate in Applied Science Degree in Medical Office Administration

**Career Community**
Business Technologies

**Program Length**
5 semesters

**Credential**
Associate in Applied Science

## Program Outcomes

## Degree Maps

Medical Office Administration Associate in Applied Science Degree

**Total Credits**
65

| Semester | Term | Term Credits |
|---|---|---|
| 1st Semester | Fall | 14 |

**Courses**
- ACA122 - College Transfer Success

**Term Credits** 1

**Courses**
- ACC120 - Principles of Financial Accounting

**Term Credits** 4

**Courses**
- ENG111 - Writing and Inquiry

**Term Credits** 3

**Courses**
- OST136 - Word Processing

**Term Credits** 3

**Courses**
- OST141 - Medical Office Terms I

**Term Credits** 3

| Semester | Term | Term Credits |
|---|---|---|
| 2nd Semester | Spring | 15 |

**Courses**
- CTS130 - Spreadsheet

**Term Credits** 3

**Courses**
- OST142 - Medical Office Terms II

**Term Credits** 3

**Courses**
- OST164 - Office Editing

**Term Credits** 3

**Courses**
- Communications requirement (Generic)

**Term Credits** 3

**Courses**
- MAT110 - Mathematical Measurement and Literacy

**OR**
- MAT143 - Quantitative Literacy

**Term Credits** 3

| Semester | Term | Term Credits |
|---|---|---|
| 3rd Semester | Summer | 6 |

**Courses**
- OST149 - Medical Legal Issues

**Term Credits** 3

**Courses**
- OST289 - Office Administration Capstone

**Term Credits** 3

| Semester | Term | Term Credits |
|---|---|---|
| 4th Semester | Fall | 15 |

**Courses**
- OST137 - Office Applications I

**Term Credits** 3

**Courses**
- OST148 - Medical Insurance and Billing

**Term Credits** 3

**Courses**
- OST184 - Office Information Management

**Term Credits** 3

**Courses**
- Social/Behavioral Science Elective (Generic)

**Term Credits** 3

**Courses**
- Humanities/Fine Arts Elective (Generic)

**Term Credits** 3

| Semester | Term | Term Credits |
|---|---|---|
| 5th Semester | Spring | 15 |

**Courses**
- BIO163 - Basic Anatomy & Physiology

**Term Credits** 5

**Courses**
- OST243 - Medical Office Simulation

**Term Credits** 3

**Courses**
- OST247 - Procedure Coding

**Term Credits** 3

**Courses**
- OST248 - Diagnostic Coding

**Term Credits** 3

**Courses**
- WBL111 - Work-Based Learning I

**Term Credits** 1

## Approved AAS Electives

**Approved AAS Electives (C-L-SHC)**

| APPROVED HUMANITIES/FINE ARTS ELECTIVES | APPROVED SOCIAL/BEHAVIORAL SCIENCE ELECTIVES |
|---|---|
| ART 111 Art Appreciation 3-0-3 | ANT 210 General Anthropology 3-0-3 |
| ART 114 Art History Survey I 3-0-3 | ANT 220 Cultural Anthropology 3-0-3 |
| ART 115 Art History Survey II 3-0-3 | ECO 151 Survey of Economics 3-0-3 |
| DRA 111 Theatre Appreciation 3-0-3 | ECO 251 Principles of Microeconomics 3-0-3 |
| ENG 125 Creative Writing I 3-0-3 | ECO 252 Principles of Macroeconomics 3-0-3 |
| ENG 231 American Literature I 3-0-3 | HIS 111 World Civilization I 3-0-3 |
| ENG 232 American Literature II 3-0-3 | HIS 112 World Civilization II 3-0-3 |
| *ENG 241 British Literature I 3-0-3 | HIS 131 American History I 3-0-3 |
| *ENG 242 British Literature II 3-0-3 | HIS 132 American History II 3-0-3 |
| HUM 110 Technology and Society 3-0-3 | HIS 222 African-American History I 3-0-3 |
| HUM 115 Critical Thinking 3-0-3 | HIS 223 African-American History II 3-0-3 |
| HUM 120 Cultural Studies 3-0-3 | HIS 226 The Civil War 3-0-3 |
| HUM 122 Southern Culture 3-0-3 | HIS 236 North Carolina History 3-0-3 |
| HUM 150 American Women's Studies 3-0-3 | POL 120 American Government 3-0-3 |
| HUM 160 Introduction to Film 2-2-3 | PSY 150 General Psychology 3-0-3 |
| MUS 110 Music Appreciation 3-0-3 | PSY 237 Social Psychology 3-0-3 |
| MUS 112 Introduction to Jazz 3-0-3 | PSY 241 Developmental Psychology 3-0-3 |
| PHI 240 Introduction to Ethics 3-0-3 | PSY 246 Adolescent Psychology 3-0-3 |
| REL 110 World Religions 3-0-3 | PSY 281 Abnormal Psychology 3-0-3 |
| REL 211 Intro to Old Testament 3-0-3 | SOC 210 Introduction to Sociology 3-0-3 |
| REL 212 Intro to New Testament 3-0-3 | SOC 213 Sociology of the Family 3-0-3 |
| | SOC 220 Social Problems 3-0-3 |
| | SOC 225 Social Diversity 3-0-3 |
| | SOC 232 Social Context of Aging 3-0-3 |
| *Not applicable for some health sciences programs.* | SOC 240 Social Psychology3-0-3 |

# A25380 - Paralegal Technology AAS

## Overview

**Program Code**
A25380

**Program Description**
The Paralegal Technology curriculum prepares individuals to work under the supervision of attorneys by performing routine legal tasks and assisting with substantive legal work. A paralegal/legal assistant may not practice law, give legal advice, or represent clients in a court of law.

Course work includes substantive and procedural legal knowledge in the areas of civil litigation, legal research and writing, real estate, family law, wills, estates, trusts, and commercial law. Required courses also include subjects such as English, mathematics, and computer utilization.

Graduates are trained to assist attorneys in probate work, investigations, public records search, drafting and filing legal documents, research, and office management. Employment opportunities are available in private law firms, governmental agencies, banks, insurance agencies, and other business organizations.

**Career Pathway Options**
Associate in Applied Science Degree in Paralegal Technology

**Career Community**
Business Technologies

**Program Length**
5 semesters

**Credential**
Associate in Applied Science

## Program Outcomes

## Degree Maps

Paralegal Technology
**Total Credits**
70

| Semester | Term | Term Credits |
|---|---|---|
| 1st Semester | Fall | 14 |

**Courses**
- ACA122 - College Transfer Success

**Term Credits** 1

**Courses**
- ENG111 - Writing and Inquiry

**Term Credits** 3

**Courses**
- LEX110 - Introduction to Paralegal Study

**Term Credits** 2

**Courses**
- LEX150 - Commercial Law I

**Term Credits** 3

**Courses**
- LEX280 - Ethics & Professionalism

**Term Credits** 2

**Courses**
- MAT110 - Mathematical Measurement and Literacy

**Term Credits** 3

| Semester | Term | Term Credits |
|---|---|---|
| 2nd Semester | Spring | 17 |

**Courses**
- CIS110 - Introduction to Computers

**Term Credits** 3

**Courses**
- ENG114 - Professional Research & Reporting

**Term Credits** 3

**Courses**
- LEX160 - Criminal Law & Procedure

**Term Credits** 3

**Courses**
- LEX270 - Law Office Management/Technology

**Term Credits** 2

**Courses**
- Humanities/Fine Arts requirement (Generic)

**Term Credits** 3

**Courses**
- Social/Behavioral Science requirement (Generic)

**Term Credits** 3

| Semester | Term | Term Credits |
|---|---|---|
| 3rd Semester | Summer | 9 |

**Courses**
- ACC115 - College Accounting

**Term Credits** 4

**Courses**
- LEX140 - Civil Litigation I

**Term Credits** 3

**Courses**
- LEX271 - Law Office Writing

**Term Credits** 2

| Semester | Term | Term Credits |
|---|---|---|
| 4th Semester | Fall | 17 |

**Courses**
- LEX120 - Legal Research/Writing I

**Term Credits** 3

**Courses**
- LEX130 - Civil Injuries

**Term Credits** 3

**Courses**
- LEX141 - Civil Litigation II

**Term Credits** 3

**Courses**
- LEX180 - Case Analysis & Reasoning

**Term Credits** 2

**Courses**
- LEX210 - Real Property I

**Term Credits** 3

**Courses**
- LEX250 - Wills, Estates, & Trusts

**Term Credits** 3

| Semester | Term | Term Credits |
|---|---|---|
| 5th Semester | Spring | 13 |

**Courses**
- LEX121 - Legal Research/Writing II

**Term Credits** 3

**Courses**
- LEX211 - Real Property II

**Term Credits** 3

**Courses**
- LEX240 - Family Law

**Term Credits** 3

**Courses**
- WBL111 - Work-Based Learning I

**Term Credits** 1

**Courses**
- Communications requirement (Generic)

**Term Credits** 3

## Approved AAS Electives

**Approved AAS Electives (C-L-SHC)**

| APPROVED HUMANITIES/FINE ARTS ELECTIVES | APPROVED SOCIAL/BEHAVIORAL SCIENCE ELECTIVES |
|---|---|
| ART 111 Art Appreciation 3-0-3<br>ART 114 Art History Survey I 3-0-3<br>ART 115 Art History Survey II 3-0-3<br>DRA 111 Theatre Appreciation 3-0-3<br>ENG 125 Creative Writing I 3-0-3<br>ENG 231 American Literature I 3-0-3<br>ENG 232 American Literature II 3-0-3<br>*ENG 241 British Literature I 3-0-3<br>*ENG 242 British Literature II 3-0-3<br>HUM 110 Technology and Society 3-0-3<br>HUM 115 Critical Thinking 3-0-3<br>HUM 120 Cultural Studies 3-0-3<br>HUM 122 Southern Culture 3-0-3<br>HUM 150 American Women's Studies 3-0-3<br>HUM 160 Introduction to Film 2-2-3<br>MUS 110 Music Appreciation 3-0-3<br>MUS 112 Introduction to Jazz 3-0-3<br>PHI 240 Introduction to Ethics 3-0-3<br>REL 110 World Religions 3-0-3<br>REL 211 Intro to Old Testament 3-0-3<br>REL 212 Intro to New Testament 3-0-3<br>**Not applicable for some health sciences programs.* | ANT 210 General Anthropology 3-0-3<br>ANT 220 Cultural Anthropology 3-0-3<br>ECO 151 Survey of Economics 3-0-3<br>ECO 251 Principles of Microeconomics 3-0-3<br>ECO 252 Principles of Macroeconomics 3-0-3<br>HIS 111 World Civilization I 3-0-3<br>HIS 112 World Civilization II 3-0-3<br>HIS 131 American History I 3-0-3<br>HIS 132 American History II 3-0-3<br>HIS 222 African-American History I 3-0-3<br>HIS 223 African-American History II 3-0-3<br>HIS 226 The Civil War 3-0-3<br>HIS 236 North Carolina History 3-0-3<br>POL 120 American Government 3-0-3<br>PSY 150 General Psychology 3-0-3<br>PSY 237 Social Psychology 3-0-3<br>PSY 241 Developmental Psychology 3-0-3<br>PSY 246 Adolescent Psychology 3-0-3<br>PSY 281 Abnormal Psychology 3-0-3<br>SOC 210 Introduction to Sociology 3-0-3<br>SOC 213 Sociology of the Family 3-0-3<br>SOC 220 Social Problems 3-0-3<br>SOC 225 Social Diversity 3-0-3<br>SOC 232 Social Context of Aging 3-0-3<br>SOC 240 Social Psychology 3-0-3 |

# A25590BS - Information Technology Business Systems and Operations Support AAS

## Overview

**Program Code**
A25590BS

**Program Description**
The Information Technology (IT) curriculum prepares graduates for employment in the technology sector as designers, testers, support technicians, system administrators, developers, or programmers who use computer software and\or hardware to design, process, implement and manage information systems in specialties such as database services, security, business intelligence, healthcare informatics and others depending on the technical path selected within this curriculum.

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, interactive media, 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 will incorporate the competencies of industry-recognized certification exams.

**Career Community**
STEM

**Program Length**
6 semesters

**Credential**
Associate in Applied Science

## Program Outcomes

## Degree Maps

Information Technology-Business Systems & Operations Support Associate in Applied Science Degree

**Total Credits**
67

| Semester | Term | Term Credits |
|---|---|---|
| 1st Semester | Fall | 16 |

**Courses**
- ACA122 - College Transfer Success

**Term Credits** 1

**Courses**
- CTI110 - Information Technology Foundations

**Term Credits** 3

**Courses**
- CTI120 - Network and Security Foundations

**Term Credits** 3

**Courses**
- CTS115 - Information Systems Business Concepts

**Term Credits** 3

**Courses**
- CTS120 - Hardware/Software Support

**Term Credits** 3

**Courses**
- NOS130 - Windows Single User

**Term Credits** 3

| Semester | Term | Term Credits |
|---|---|---|

| 2nd Semester | Spring | 12 |
|---|---|---|

**Courses**
- CIS115 - Introduction to Programming and Logic

**Term Credits** 3

**Courses**
- CSC113 - Artificial Intelligence Fundamentals

**Term Credits** 3

**Courses**
- DBA110 - Database Concepts

**Term Credits** 3

**Courses**
- WEB115 - Web Markup and Scripting

**Term Credits** 3

| Semester | Term | Term Credits |
|---|---|---|
| 3rd Semester | Summer | 6 |

**Courses**
- ENG111 - Writing and Inquiry

**Term Credits** 3

**Courses**
- MAT143 - Quantitative Literacy
  **OR**
- MAT171 - Precalculus Algebra

**Term Credits** 3

| Semester | Term | Term Credits |
|---|---|---|
| 4th Semester | Fall | 12 |

**Courses**
- NOS230 - Windows Administration I

**Term Credits** 3

**Courses**
- SEC110 - Security Concepts

**Term Credits** 3

**Courses**
- CSC134 - C++ Programming
  **OR**
- CSC139 - Visual BASIC Programming
  **OR**
- CSC151 - JAVA Programming

**Term Credits** 3

**Courses**
- CIS110 - Introduction to Computers
  **OR**
- CSC134 - C++ Programming
  **OR**
- CSC139 - Visual BASIC Programming
  **OR**
- CSC151 - JAVA Programming
  **OR**
- CTI140 - Virtualization Concepts

**Term Credits** 3

| Semester | Term | Term Credits |
|---|---|---|
| 5th Semester | Spring | 15 |

**Courses**
- CTI289 - Computer Technology Integration Capstone Project

**Term Credits** 3

**Courses**
- DBA120 - Database Programming I

**Term Credits** 3

**Courses**
- NOS120 - Linux Single User

**Term Credits** 3

**Courses**
- WEB151 - Mobile Application Development I

**Term Credits** 3

**Courses**
- Social/Behavioral Science Elective (Generic)

**Term Credits** 3

| Semester | Term | Term Credits |
|---|---|---|
| 6th Semester | Summer | 6 |

**Courses**
- Humanities/Fine Arts Elective (Generic)

**Term Credits** 3

**Courses**
- Communications Elective (Generic)

**Term Credits** 3

## Approved AAS Electives

**Approved AAS Electives (C-L-SHC)**

| APPROVED HUMANITIES/FINE ARTS ELECTIVES | APPROVED SOCIAL/BEHAVIORAL SCIENCE ELECTIVES |
|---|---|
| ART 111 Art Appreciation 3-0-3 | ANT 210 General Anthropology 3-0-3 |
| ART 114 Art History Survey I 3-0-3 | ANT 220 Cultural Anthropology 3-0-3 |
| ART 115 Art History Survey II 3-0-3 | ECO 151 Survey of Economics 3-0-3 |
| DRA 111 Theatre Appreciation 3-0-3 | ECO 251 Principles of Microeconomics 3-0-3 |
| ENG 125 Creative Writing I 3-0-3 | ECO 252 Principles of Macroeconomics 3-0-3 |
| ENG 231 American Literature I 3-0-3 | HIS 111 World Civilization I 3-0-3 |
| ENG 232 American Literature II 3-0-3 | HIS 112 World Civilization II 3-0-3 |
| *ENG 241 British Literature I 3-0-3 | HIS 131 American History I 3-0-3 |
| *ENG 242 British Literature II 3-0-3 | HIS 132 American History II 3-0-3 |
| HUM 110 Technology and Society 3-0-3 | HIS 222 African-American History I 3-0-3 |
| HUM 115 Critical Thinking 3-0-3 | HIS 223 African-American History II 3-0-3 |
| HUM 120 Cultural Studies 3-0-3 | HIS 226 The Civil War 3-0-3 |
| HUM 122 Southern Culture 3-0-3 | HIS 236 North Carolina History 3-0-3 |
| HUM 150 American Women's Studies 3-0-3 | POL 120 American Government 3-0-3 |
| HUM 160 Introduction to Film 2-2-3 | PSY 150 General Psychology 3-0-3 |
| MUS 110 Music Appreciation 3-0-3 | PSY 237 Social Psychology 3-0-3 |
| MUS 112 Introduction to Jazz 3-0-3 | PSY 241 Developmental Psychology 3-0-3 |
| PHI 240 Introduction to Ethics 3-0-3 | PSY 246 Adolescent Psychology 3-0-3 |
| REL 110 World Religions 3-0-3 | PSY 281 Abnormal Psychology 3-0-3 |
| REL 211 Intro to Old Testament 3-0-3 | SOC 210 Introduction to Sociology 3-0-3 |
| REL 212 Intro to New Testament 3-0-3 | SOC 213 Sociology of the Family 3-0-3 |
| | SOC 220 Social Problems 3-0-3 |
| | SOC 225 Social Diversity 3-0-3 |
| | SOC 232 Social Context of Aging 3-0-3 |
| *Not applicable for some health sciences programs.* | SOC 240 Social Psychology 3-0-3 |

# A25590NS - Information Technology Network and Cybersecurity AAS

## Overview

**Program Code**
A25590NS

**Program Description**
The Information Technology (IT) curriculum prepares graduates for employment in the technology sector as designers, testers, support technicians, system administrators, developers, or programmers who use computer software and\or hardware to design, process, implement and manage information systems in specialties such as database services, security, business intelligence, healthcare informatics and others depending on the technical path selected within this curriculum.

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, interactive media, 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 will incorporate the competencies of industry-recognized certification exams.

**Career Pathway Options**
Specialized Networking Certificate Programs

**Career Community**
STEM

**Program Length**
6 semesters

**Credential**
Associate in Applied Science

## Program Outcomes

## Degree Maps

Information Technology-Network and Cybersecurity Management Associate in Applied Science Degree

**Total Credits**
67

| Semester | Term | Term Credits |
|---|---|---|
| 1st Semester | Fall | 16 |

**Courses**
- ACA122 - College Transfer Success

**Term Credits** 1

**Courses**
- CTI110 - Information Technology Foundations

**Term Credits** 3

**Courses**
- CTI120 - Network and Security Foundations

**Term Credits** 3

**Courses**
- CTS115 - Information Systems Business Concepts

**Term Credits** 3

**Courses**
- NOS130 - Windows Single User

**Term Credits** 3

**Courses**
- SEC110 - Security Concepts

**Term Credits** 3

| Semester | Term | Term Credits |
|---|---|---|
| 2nd Semester | Spring | 15 |

**Courses**
- NET125 - Introduction to Networks

**Term Credits** 3

**Courses**
- NOS120 - Linux Single User

**Term Credits** 3

**Courses**
- NOS230 - Windows Administration I

**Term Credits** 3

**Courses**
- SEC150 - Secure Communications

**Term Credits** 3

**Courses**
- MAT143 - Quantitative Literacy
  **OR**
- MAT171 - Precalculus Algebra

**Term Credits** 3

| Semester | Term | Term Credits |
|---|---|---|
| 3rd Semester | Summer | 6 |

**Courses**
- NET126 - Switching and Routing

**Term Credits** 3

**Courses**
- ENG111 - Writing and Inquiry

**Term Credits** 3

| Semester | Term | Term Credits |
|---|---|---|
| 4th Semester | Fall | 12 |

**Courses**
- CIS115 - Introduction to Programming and Logic

**Term Credits** 3

**Courses**
- NOS220 - Linux Administration I

**Term Credits** 3

**Courses**
- SEC160 - Security Administration I

**Term Credits** 3

**Courses**
- CIS110 - Introduction to Computers
  **OR**
- DBA110 - Database Concepts
  **OR**
- NET225 - Enterprise Networking

**Term Credits** 3

| Semester | Term | Term Credits |
|---|---|---|
| 5th Semester | Spring | 12 |

**Courses**
- CTI289 - Computer Technology Integration Capstone Project

**Term Credits** 3

**Courses**
- SEC175 - Perimeter Defense

**Term Credits** 3

**Courses**
- SEC210 - Intrusion Detection

**Term Credits** 3

**Courses**
- Communications Elective (Generic)

**Term Credits** 3

| Semester | Term | Term Credits |
|---|---|---|
| 6th Semester | Summer | 6 |

**Courses**
- Humanities/Fine Arts Elective (Generic)

**Term Credits** 3

**Courses**
- Social/Behavioral Science Elective (Generic)

**Term Credits** 3

## Approved AAS Electives

**Approved AAS Electives (C-L-SHC)**

| APPROVED HUMANITIES/FINE ARTS ELECTIVES | APPROVED SOCIAL/BEHAVIORAL SCIENCE ELECTIVES |
|---|---|
| ART 111 Art Appreciation 3-0-3 | ANT 210 General Anthropology 3-0-3 |
| ART 114 Art History Survey I 3-0-3 | ANT 220 Cultural Anthropology 3-0-3 |
| ART 115 Art History Survey II 3-0-3 | ECO 151 Survey of Economics 3-0-3 |
| DRA 111 Theatre Appreciation 3-0-3 | ECO 251 Principles of Microeconomics 3-0-3 |
| ENG 125 Creative Writing I 3-0-3 | ECO 252 Principles of Macroeconomics 3-0-3 |
| ENG 231 American Literature I 3-0-3 | HIS 111 World Civilization I 3-0-3 |
| ENG 232 American Literature II 3-0-3 | HIS 112 World Civilization II 3-0-3 |
| *ENG 241 British Literature I 3-0-3 | HIS 131 American History I 3-0-3 |
| *ENG 242 British Literature II 3-0-3 | HIS 132 American History II 3-0-3 |
| HUM 110 Technology and Society 3-0-3 | HIS 222 African-American History I 3-0-3 |
| HUM 115 Critical Thinking 3-0-3 | HIS 223 African-American History II 3-0-3 |
| HUM 120 Cultural Studies 3-0-3 | HIS 226 The Civil War 3-0-3 |
| HUM 122 Southern Culture 3-0-3 | HIS 236 North Carolina History 3-0-3 |
| HUM 150 American Women's Studies 3-0-3 | POL 120 American Government 3-0-3 |
| HUM 160 Introduction to Film 2-2-3 | PSY 150 General Psychology 3-0-3 |
| MUS 110 Music Appreciation 3-0-3 | PSY 237 Social Psychology 3-0-3 |
| MUS 112 Introduction to Jazz 3-0-3 | PSY 241 Developmental Psychology 3-0-3 |
| PHI 240 Introduction to Ethics 3-0-3 | PSY 246 Adolescent Psychology 3-0-3 |
| REL 110 World Religions 3-0-3 | PSY 281 Abnormal Psychology 3-0-3 |
| REL 211 Intro to Old Testament 3-0-3 | SOC 210 Introduction to Sociology 3-0-3 |
| REL 212 Intro to New Testament 3-0-3 | SOC 213 Sociology of the Family 3-0-3 |
| | SOC 220 Social Problems 3-0-3 |
| | SOC 225 Social Diversity 3-0-3 |
| | SOC 232 Social Context of Aging 3-0-3 |
| *Not applicable for some health sciences programs.* | SOC 240 Social Psychology 3-0-3 |

# A25800 - Accounting and Finance AAS

## Overview

**Program Code**
A25800

**Program Description**
The Accounting and Finance curriculum is designed to provide students with the knowledge and the 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.

**Career Pathway Options**
Associate in Applied Science Degree in Accounting & Finance

**Career Community**
Business Technologies

**Program Length**
5 semesters

**Credential**
Associate in Applied Science

## Program Outcomes

## Degree Maps

Accounting and Finance, Associate in Applied Science

**Total Credits**
68

| Semester | Term | Term Credits |
|---|---|---|
| 1st Semester | Fall | 17 |

**Courses**
- ACA122 - College Transfer Success

**Term Credits** 1

**Courses**
- ACC120 - Principles of Financial Accounting

**Term Credits** 4

**Courses**
- ACC129 - Individual Income Taxes

**Term Credits** 3

**Courses**
- BUS110 - Introduction to Business

**Term Credits** 3

**Courses**
- BUS125 - Personal Finance

**Term Credits** 3

**Courses**
- ENG111 - Writing and Inquiry

**Term Credits** 3

| Semester | Term | Term Credits |
|---|---|---|
| 2nd Semester | Spring | 15 |

**Courses**
- ACC121 - Principles of Managerial Accounting

**Term Credits** 4

**Courses**
- ACC122 - Principles of Financial Accounting II

**Term Credits** 3

**Courses**
- ACC149 - Introduction to Accounting Spreadsheets

**Term Credits** 2

**Courses**
- BUS115 - Business Law I

**Term Credits** 3

**Courses**
- ECO151 - Survey of Economics

**OR**
- ECO251 - Principles of Microeconomics

**OR**
- ECO252 - Principles of Macroeconomics

**Term Credits** 3

| Semester | Term | Term Credits |
|---|---|---|
| 3rd Semester | Summer | 6 |

**Courses**
- CIS110 - Introduction to Computers

**Term Credits** 3

**Courses**
- MAT110 - Mathematical Measurement and Literacy

**OR**
- MAT143 - Quantitative Literacy

**Term Credits** 3

| Semester | Term | Term Credits |
|---|---|---|
| 4th Semester | Fall | 14 |

**Courses**
- ACC140 - Payroll Accounting

**Term Credits** 2

**Courses**
- ACC150 - Accounting Software Applications

**Term Credits** 2

**Courses**
- ACC220 - Intermediate Accounting I

**Term Credits** 4

**Courses**
- BUS225 - Business Finance

**Term Credits** 3

**Courses**
- Social/Behavioral Science Elective (Generic)

**Term Credits** 3

| Semester | Term | Term Credits |
|---|---|---|
| 5th Semester | Spring | 16 |

**Courses**
- ACC130 - Business Income Taxes

**Term Credits** 3

**Courses**
- ACC221 - Intermediate Accounting II

**Term Credits** 4

**Courses**
- ACC227 - Practices in Accounting

**Term Credits** 3

**Courses**
- ENG114 - Professional Research & Reporting

**Term Credits** 3

**Courses**
- Humanities/Fine Arts Elective (Generic)

**Term Credits** 3

## Approved AAS Electives

**Approved AAS Electives (C-L-SHC)**

| APPROVED HUMANITIES/FINE ARTS ELECTIVES | APPROVED SOCIAL/BEHAVIORAL SCIENCE ELECTIVES |
|---|---|
| ART 111 Art Appreciation 3-0-3 | ANT 210 General Anthropology 3-0-3 |
| ART 114 Art History Survey I 3-0-3 | ANT 220 Cultural Anthropology 3-0-3 |
| ART 115 Art History Survey II 3-0-3 | ECO 151 Survey of Economics 3-0-3 |
| DRA 111 Theatre Appreciation 3-0-3 | ECO 251 Principles of Microeconomics 3-0-3 |
| ENG 125 Creative Writing I 3-0-3 | ECO 252 Principles of Macroeconomics 3-0-3 |
| ENG 231 American Literature I 3-0-3 | HIS 111 World Civilization I 3-0-3 |
| ENG 232 American Literature II 3-0-3 | HIS 112 World Civilization II 3-0-3 |
| *ENG 241 British Literature I 3-0-3 | HIS 131 American History I 3-0-3 |
| *ENG 242 British Literature II 3-0-3 | HIS 132 American History II 3-0-3 |
| HUM 110 Technology and Society 3-0-3 | HIS 222 African-American History I 3-0-3 |
| HUM 115 Critical Thinking 3-0-3 | HIS 223 African-American History II 3-0-3 |
| HUM 120 Cultural Studies 3-0-3 | HIS 226 The Civil War 3-0-3 |
| HUM 122 Southern Culture 3-0-3 | HIS 236 North Carolina History 3-0-3 |
| HUM 150 American Women's Studies 3-0-3 | POL 120 American Government 3-0-3 |
| HUM 160 Introduction to Film 2-2-3 | PSY 150 General Psychology 3-0-3 |
| MUS 110 Music Appreciation 3-0-3 | PSY 237 Social Psychology 3-0-3 |
| MUS 112 Introduction to Jazz 3-0-3 | PSY 241 Developmental Psychology 3-0-3 |
| PHI 240 Introduction to Ethics 3-0-3 | PSY 246 Adolescent Psychology 3-0-3 |
| REL 110 World Religions 3-0-3 | PSY 281 Abnormal Psychology 3-0-3 |
| REL 211 Intro to Old Testament 3-0-3 | SOC 210 Introduction to Sociology 3-0-3 |
| REL 212 Intro to New Testament 3-0-3 | SOC 213 Sociology of the Family 3-0-3 |
| | SOC 220 Social Problems 3-0-3 |
| | SOC 225 Social Diversity 3-0-3 |
| | SOC 232 Social Context of Aging 3-0-3 |
| *Not applicable for some health sciences programs.* | SOC 240 Social Psychology 3-0-3 |

# A30120 - Audio and Video Production Technology AAS

## Overview

**Program Code**
A30120

**Program Description**
Students enrolled in the Audio and Video Production Technology curriculum will develop professional skills in audio, video, and related applications.

Training will emphasize speech, writing, production planning, postproduction, and distribution. Students will also study the evolution of media, revenue models, entrepreneurial opportunities, and governmental regulations. Hands-on training, troubleshooting, collaboration, and time management skills are essential to the instructional process.

Upon successful completion, students are prepared to obtain audio and/or video-related employment.

**Career Pathway Options**
Associate in Applied Science Degree in Audio and Video Production Technology

**Career Community**
Arts

**Program Length**
6 semesters

**Credential**
Associate in Applied Science

## Program Outcomes

## Degree Maps

Audio and Video Production Technology Associate in Applied Science -†Audio Production sequence‡

**Total Credits**
66

| Semester | Term | Term Credits |
|---|---|---|
| 1st Semester | Fall | 17 |

**Courses**
- BPT110 - Media Evolution

**Term Credits** 3

**Courses**
- BPT112 - Media Writing

**Term Credits** 4

**Courses**
- BPT121 - Media Speech Techniques

**Term Credits** 3

**Courses**
- BPT131 - Audio Production I

**Term Credits** 4

**Courses**
- BPT135 - Audio Performance I

**Term Credits** 2

**Courses**
- ACA122 - College Transfer Success

**Term Credits** 1

| Semester | Term | Term Credits |
|---|---|---|
| 2nd Semester | Spring | 16 |

**Courses**
- BPT220 - Emerging Technologies

**Term Credits** 4

**Courses**
- BPT132 - Audio Production II

**Term Credits** 4

**Courses**
- BPT136 - Audio Performance II

**Term Credits** 2

**Courses**
- Humanities/Fine Arts Elective (Generic)

**Term Credits** 3

**Courses**
- ENG110 - Freshman Composition
  **OR**
- ENG111 - Writing and Inquiry

**Term Credits** 3

| Semester | Term | Term Credits |
|---|---|---|
| 3rd Semester | Summer | 1 |

**Courses**
- WBL111 - Work-Based Learning I

**Term Credits** 1

| Semester | Term | Term Credits |
|---|---|---|
| 4th Semester | Fall | 17 |

**Courses**
- BPT231 - Video Production I

**Term Credits** 4

**Courses**
- BPT235A (Generic)

**Term Credits** 1

**Courses**
- BPT111 - Broadcast Law & Ethics

**Term Credits** 3

**Courses**
- BPT215 - Industry Career Preparation

**Term Credits** 3

**Courses**
- Social/Behavioral Science Elective (Generic)

**Term Credits** 3

**Courses**
- Communications requirement (Generic)

**Term Credits** 3

| Semester | Term | Term Credits |
|---|---|---|
| 5th Semester | Spring | 14 |

**Courses**
- BPT232 - Video Production II

**Term Credits** 4

**Courses**
- BPT235B (Generic)

**Term Credits** 1

**Courses**
- BPT250 - Corporate Video

**Term Credits** 3

**Courses**
- BPT285 - Broadcast Production Capstone

**Term Credits** 3

**Courses**
- MAT110 - Mathematical Measurement and Literacy
  **OR**
- MAT143 - Quantitative Literacy

**Term Credits** 3

| Semester | Term | Term Credits |
|---|---|---|
| 6th Semester | Summer | 1 |

**Courses**
- WBL121 - Work-Based Learning II
  **OR**
- BPT236 - Video Performance II

**Term Credits** 1

Audio and Video Production Technology Associate in Applied Science - Video Production sequence
**Total Credits**
66

| Semester | Term | Term Credits |
|---|---|---|
| 1st Semester | Fall | 16 |

**Courses**
- BPT110 - Media Evolution

**Term Credits** 3

**Courses**
- BPT112 - Media Writing

**Term Credits** 4

**Courses**
- BPT121 - Media Speech Techniques

**Term Credits** 3

**Courses**
- BPT231 - Video Production I

**Term Credits** 4

**Courses**
- BPT235A (Generic)

**Term Credits** 1

**Courses**
- ACA122 - College Transfer Success

**Term Credits** 1

| Semester | Term | Term Credits |
|---|---|---|
| 2nd Semester | Spring | 15 |

**Courses**
- BPT220 - Emerging Technologies

**Term Credits** 4

**Courses**
- BPT232 - Video Production II

**Term Credits** 4

**Courses**
- BPT235B (Generic)

**Term Credits** 1

**Courses**
- Humanities/Fine Arts Elective (Generic)

**Term Credits** 3

**Courses**
- ENG110 - Freshman Composition
  **OR**
- ENG111 - Writing and Inquiry

**Term Credits** 3

| Semester | Term | Term Credits |
|---|---|---|
| 3rd Semester | Summer | 1 |

**Courses**
- WBL121 - Work-Based Learning II
  **OR**
- BPT236 - Video Performance II

**Term Credits** 1

| Semester | Term | Term Credits |
|---|---|---|
| 4th Semester | Fall | 18 |

**Courses**
- BPT131 - Audio Production I

**Term Credits** 4

**Courses**
- BPT135 - Audio Performance I

**Term Credits** 2

**Courses**
- BPT111 - Broadcast Law & Ethics

**Term Credits** 3

**Courses**
- BPT215 - Industry Career Preparation

**Term Credits** 3

**Courses**
- Social/Behavioral Science Elective (Generic)

**Term Credits** 3

**Courses**
- Communications requirement (Generic)

**Term Credits** 3

| Semester | Term | Term Credits |
|---|---|---|
| 5th Semester | Spring | 15 |

**Courses**
- BPT132 - Audio Production II

**Term Credits** 4

**Courses**
- BPT136 - Audio Performance II

**Term Credits** 2

**Courses**
- BPT250 - Corporate Video

**Term Credits** 3

**Courses**
- BPT285 - Broadcast Production Capstone

**Term Credits** 3

**Courses**
- MAT110 - Mathematical Measurement and Literacy
  **OR**
- MAT143 - Quantitative Literacy

**Term Credits** 3

| Semester | Term | Term Credits |
|---|---|---|
| 6th Semester | Summer | 1 |

**Courses**
- WBL111 - Work-Based Learning I

**Term Credits** 1

## Approved AAS Electives

**Approved AAS Electives (C-L-SHC)**

| APPROVED HUMANITIES/FINE ARTS ELECTIVES | APPROVED SOCIAL/BEHAVIORAL SCIENCE ELECTIVES |
|---|---|
| ART 111 Art Appreciation 3-0-3 | ANT 210 General Anthropology 3-0-3 |
| ART 114 Art History Survey I 3-0-3 | ANT 220 Cultural Anthropology 3-0-3 |
| ART 115 Art History Survey II 3-0-3 | ECO 151 Survey of Economics 3-0-3 |
| DRA 111 Theatre Appreciation 3-0-3 | ECO 251 Principles of Microeconomics 3-0-3 |
| ENG 125 Creative Writing I 3-0-3 | ECO 252 Principles of Macroeconomics 3-0-3 |
| ENG 231 American Literature I 3-0-3 | HIS 111 World Civilization I 3-0-3 |
| ENG 232 American Literature II 3-0-3 | HIS 112 World Civilization II 3-0-3 |
| *ENG 241 British Literature I 3-0-3 | HIS 131 American History I 3-0-3 |
| *ENG 242 British Literature II 3-0-3 | HIS 132 American History II 3-0-3 |
| HUM 110 Technology and Society 3-0-3 | HIS 222 African-American History I 3-0-3 |
| HUM 115 Critical Thinking 3-0-3 | HIS 223 African-American History II 3-0-3 |
| HUM 120 Cultural Studies 3-0-3 | HIS 226 The Civil War 3-0-3 |
| HUM 122 Southern Culture 3-0-3 | HIS 236 North Carolina History 3-0-3 |
| HUM 150 American Women's Studies 3-0-3 | POL 120 American Government 3-0-3 |
| HUM 160 Introduction to Film 2-2-3 | PSY 150 General Psychology 3-0-3 |
| MUS 110 Music Appreciation 3-0-3 | PSY 237 Social Psychology 3-0-3 |
| MUS 112 Introduction to Jazz 3-0-3 | PSY 241 Developmental Psychology 3-0-3 |
| PHI 240 Introduction to Ethics 3-0-3 | PSY 246 Adolescent Psychology 3-0-3 |
| REL 110 World Religions 3-0-3 | PSY 281 Abnormal Psychology 3-0-3 |
| REL 211 Intro to Old Testament 3-0-3 | SOC 210 Introduction to Sociology 3-0-3 |
| REL 212 Intro to New Testament 3-0-3 | SOC 213 Sociology of the Family 3-0-3 |
| | SOC 220 Social Problems 3-0-3 |
| | SOC 225 Social Diversity 3-0-3 |
| | SOC 232 Social Context of Aging 3-0-3 |
| *Not applicable for some health sciences programs.* | SOC 240 Social Psychology 3-0-3 |

# A35100 - Air Conditioning, Heating and Refrigeration Technology AAS

## Overview

**Program Code**
A35100

**Program Description**
The Air Conditioning, Heating, and Refrigeration Technology curriculum provides the basic knowledge to develop skills necessary to work with residential and light commercial systems.

Topics include mechanical refrigeration, heating and cooling theory, electricity, controls, and safety. The diploma program covers air conditioning, furnaces, heat pumps, tools and instruments. In addition, the AAS degree covers residential building codes, residential system sizing, and advanced comfort systems.

Diploma graduates should be able to assist in the start up, preventive maintenance, service, repair, and/or installation of residential and light commercial systems. AAS degree graduates should be able to demonstrate an understanding of system selection and balance and advanced systems.

**Career Community**
Applied Technologies

**Program Length**
6 semesters

**Credential**
Associate in Applied Science

## Program Outcomes

## Degree Maps

Air Conditioning, Heating, and Refrigeration Technology, Associate in Applied Science

**Total Credits**
64

| Semester | Term | Term Credits |
|---|---|---|
| 1st Semester | Fall | 12 |

**Courses**
- AHR110 - Introduction to Refrigeration

**Term Credits** 5

**Courses**
- AHR111 - HVACR Electricity

**Term Credits** 3

**Courses**
- ACA122 - College Transfer Success

**Term Credits** 1

**Courses**
- ENG110 - Freshman Composition

**OR**
- ENG111 - Writing and Inquiry

**Term Credits** 3

| Semester | Term | Term Credits |
|---|---|---|
| 2nd Semester | Spring | 15 |

**Courses**
- AHR112 - Heating Technology

**Term Credits** 4

**Courses**
- AHR113 - Comfort Cooling

**Term Credits** 4

**Courses**
- AHR114 - Heat Pump Technology

**Term Credits** 4

**Courses**
- COM110 - Introduction to Communication

**Term Credits** 3

| Semester | Term | Term Credits |
|---|---|---|
| 3rd Semester | Summer | 6 |

**Courses**
- AHR115 - Refrigeration Systems

**Term Credits** 2

**Courses**
- AHR160 - Refrigerant Certification

**Term Credits** 1

**Courses**
- Humanities/Fine Arts Elective (Generic)

**Term Credits** 3

| Semester | Term | Term Credits |
|---|---|---|
| 4th Semester | Fall | 12 |

**Courses**
- AHR125 - HVACR Electronics

**Term Credits** 3

**Courses**
- AHR133 - HVAC Servicing

**Term Credits** 4

**Courses**
- AHR151 - HVAC Duct Systems I

**Term Credits** 2

**Courses**
- MAT110 - Mathematical Measurement and Literacy
  **OR**
- MAT143 - Quantitative Literacy
  **OR**
- PHY121 - Applied Physics I

**Term Credits** 3

| Semester | Term | Term Credits |
|---|---|---|
| 5th Semester | Spring | 12 |

**Courses**
- AHR180 - HVACR Customer Relations

**Term Credits** 1

**Courses**
- AHR212 - Advanced Comfort Systems

**Term Credits** 4

**Courses**
- AHR213 - HVACR Building Code

**Term Credits** 2

**Courses**
- AHR215 - Commercial HVAC Controls

**Term Credits** 2

**Courses**
- AHR225 - Commercial System Design

**Term Credits** 3

| Semester | Term | Term Credits |
|---|---|---|
| 6th Semester | Summer | 7 |

**Courses**
- AHR211 - Residential System Design

**Term Credits** 3

**Courses**
- WBL111 - Work-Based Learning I

**Term Credits** 1

**Courses**
- Social/Behavioral Science Elective (Generic)

**Term Credits** 3

## Approved AAS Electives

**Approved AAS Electives (C-L-SHC)**

| APPROVED HUMANITIES/FINE ARTS ELECTIVES | APPROVED SOCIAL/BEHAVIORAL SCIENCE ELECTIVES |
|---|---|
| ART 111 Art Appreciation 3-0-3 | ANT 210 General Anthropology 3-0-3 |
| ART 114 Art History Survey I 3-0-3 | ANT 220 Cultural Anthropology 3-0-3 |
| ART 115 Art History Survey II 3-0-3 | ECO 151 Survey of Economics 3-0-3 |
| DRA 111 Theatre Appreciation 3-0-3 | ECO 251 Principles of Microeconomics 3-0-3 |
| ENG 125 Creative Writing I 3-0-3 | ECO 252 Principles of Macroeconomics 3-0-3 |
| ENG 231 American Literature I 3-0-3 | HIS 111 World Civilization I 3-0-3 |
| ENG 232 American Literature II 3-0-3 | HIS 112 World Civilization II 3-0-3 |
| *ENG 241 British Literature I 3-0-3 | HIS 131 American History I 3-0-3 |
| *ENG 242 British Literature II 3-0-3 | HIS 132 American History II 3-0-3 |
| HUM 110 Technology and Society 3-0-3 | HIS 222 African-American History I 3-0-3 |
| HUM 115 Critical Thinking 3-0-3 | HIS 223 African-American History II 3-0-3 |
| HUM 120 Cultural Studies 3-0-3 | HIS 226 The Civil War 3-0-3 |
| HUM 122 Southern Culture 3-0-3 | HIS 236 North Carolina History 3-0-3 |
| HUM 150 American Women's Studies 3-0-3 | POL 120 American Government 3-0-3 |
| HUM 160 Introduction to Film 2-2-3 | PSY 150 General Psychology 3-0-3 |
| MUS 110 Music Appreciation 3-0-3 | PSY 237 Social Psychology 3-0-3 |
| MUS 112 Introduction to Jazz 3-0-3 | PSY 241 Developmental Psychology 3-0-3 |
| PHI 240 Introduction to Ethics 3-0-3 | PSY 246 Adolescent Psychology 3-0-3 |
| REL 110 World Religions 3-0-3 | PSY 281 Abnormal Psychology 3-0-3 |
| REL 211 Intro to Old Testament 3-0-3 | SOC 210 Introduction to Sociology 3-0-3 |
| REL 212 Intro to New Testament 3-0-3 | SOC 213 Sociology of the Family 3-0-3 |
| | SOC 220 Social Problems 3-0-3 |
| | SOC 225 Social Diversity 3-0-3 |
| | SOC 232 Social Context of Aging 3-0-3 |
| *Not applicable for some health sciences programs.* | SOC 240 Social Psychology 3-0-3 |

# A35130 - Electrical Systems Technology AAS

## Overview

**Program Code**
A35130

**Program Description**
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.

Coursework, most of which is hands-on, will include such topics 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.

Graduates should qualify for a variety of jobs in the electrical field as an on-the-job trainee or apprentice assisting in the layout, installation, and maintenance of electrical systems.

**Career Community**
Applied Technologies

**Program Length**
5 semesters

**Credential**
Associate in Applied Science

## Program Outcomes

## Degree Maps

Electrical Systems Technology Associate in Applied Science Degree
**Total Credits**
67

| Semester | Term | Term Credits |
|---|---|---|
| 1st Semester | Fall | 14 |

**Courses**
- ELC112 - DC/AC Electricity

**Term Credits** 5

**Courses**
- ELC113 - Residential Wiring

**Term Credits** 4

**Courses**
- ELC118 - National Electrical Code

**Term Credits** 2

**Courses**
- ISC112 - Industrial Safety

**Term Credits** 2

**Courses**
- ACA122 - College Transfer Success

**Term Credits** 1

| Semester | Term | Term Credits |
|---|---|---|
| 2nd Semester | Spring | 14 |

**Courses**
- ELC114 - Commercial Wiring

**Term Credits** 4

**Courses**
- ELC117 - Motors and Controls

**Term Credits** 4

**Courses**
- ELC119 - NEC Calculations

**Term Credits** 2

**Courses**
- ELN131 - Analog Electronics I

**Term Credits** 4

| Semester | Term | Term Credits |
|---|---|---|
| 3rd Semester | Summer | 13 |

**Courses**
- ELC127 - Software for Technicians

**Term Credits** 2

**Courses**
- ELC121 - Electrical Estimating

**Term Credits** 2

**Courses**
- MAT110 - Mathematical Measurement and Literacy

**Term Credits** 3

**Courses**
- Humanities/Fine Arts Electives (Generic)

**Term Credits** 3

**Courses**
- ENG110 - Freshman Composition

**OR**
- ENG111 - Writing and Inquiry

**Term Credits** 3

| Semester | Term | Term Credits |
|---|---|---|
| 4th Semester | Fall | 13 |

**Courses**
- BPR130 - Print Reading-Construction

**Term Credits** 3

**Courses**
- ELC128 - Introduction to Programmable Logic Controller

**Term Credits** 3

**Courses**
- ALT120 - Renewable Energy Technologies

**Term Credits** 3

**Courses**
- ELC122 - Advanced Residential Wiring

**Term Credits** 4

| Semester | Term | Term Credits |
|---|---|---|
| 5th Semester | Spring | 13 |

**Courses**
- ELC220 - Photovoltaic System Technology

**Term Credits** 3

**Courses**
- BUS110 - Introduction to Business

**Term Credits** 3

**Courses**
- WBL111 - Work-Based Learning I

**Term Credits** 1

**Courses**
- Social/Behavioral Science Elective (Generic)

**Term Credits** 3

**Courses**
- Communications Elective (Generic)

**Term Credits** 3

## Approved AAS Electives

**Approved AAS Electives (C-L-SHC)**

| APPROVED HUMANITIES/FINE ARTS ELECTIVES | APPROVED SOCIAL/BEHAVIORAL SCIENCE ELECTIVES |
|---|---|
| ART 111 Art Appreciation 3-0-3 | ANT 210 General Anthropology 3-0-3 |
| ART 114 Art History Survey I 3-0-3 | ANT 220 Cultural Anthropology 3-0-3 |
| ART 115 Art History Survey II 3-0-3 | ECO 151 Survey of Economics 3-0-3 |
| DRA 111 Theatre Appreciation 3-0-3 | ECO 251 Principles of Microeconomics 3-0-3 |
| ENG 125 Creative Writing I 3-0-3 | ECO 252 Principles of Macroeconomics 3-0-3 |
| ENG 231 American Literature I 3-0-3 | HIS 111 World Civilization I 3-0-3 |
| ENG 232 American Literature II 3-0-3 | HIS 112 World Civilization II 3-0-3 |
| *ENG 241 British Literature I 3-0-3 | HIS 131 American History I 3-0-3 |
| *ENG 242 British Literature II 3-0-3 | HIS 132 American History II 3-0-3 |
| HUM 110 Technology and Society 3-0-3 | HIS 222 African-American History I 3-0-3 |
| HUM 115 Critical Thinking 3-0-3 | HIS 223 African-American History II 3-0-3 |
| HUM 120 Cultural Studies 3-0-3 | HIS 226 The Civil War 3-0-3 |
| HUM 122 Southern Culture 3-0-3 | HIS 236 North Carolina History 3-0-3 |
| HUM 150 American Women's Studies 3-0-3 | POL 120 American Government 3-0-3 |
| HUM 160 Introduction to Film 2-2-3 | PSY 150 General Psychology 3-0-3 |
| MUS 110 Music Appreciation 3-0-3 | PSY 237 Social Psychology 3-0-3 |
| MUS 112 Introduction to Jazz 3-0-3 | PSY 241 Developmental Psychology 3-0-3 |
| PHI 240 Introduction to Ethics 3-0-3 | PSY 246 Adolescent Psychology 3-0-3 |
| REL 110 World Religions 3-0-3 | PSY 281 Abnormal Psychology 3-0-3 |
| REL 211 Intro to Old Testament 3-0-3 | SOC 210 Introduction to Sociology 3-0-3 |
| REL 212 Intro to New Testament 3-0-3 | SOC 213 Sociology of the Family 3-0-3 |
| | SOC 220 Social Problems 3-0-3 |
| | SOC 225 Social Diversity 3-0-3 |
| | SOC 232 Social Context of Aging 3-0-3 |
| *Not applicable for some health sciences programs.* | SOC 240 Social Psychology 3-0-3 |

# A35140 - Building Construction Technology AAS

## Overview

**Program Code**
A35140

**Program Description**
Pathway Description: These curriculums are 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.

Building Construction Technology: A program that prepares individuals to apply technical knowledge and skills to residential and commercial building construction and remodeling. Includes instruction in construction equipment and safety; site preparation and layout; construction estimating; print reading; building codes; framing; masonry; heating, ventilation, and air conditioning; electrical and mechanical systems; interior and exterior finishing; and plumbing.

**Career Community**
Applied Technologies

**Program Length**
5 semesters

**Credential**
Associate in Applied Science

## Program Outcomes

## Degree Maps

Building Construction Technology Associate in Applied Science Degree

**Total Credits**
69

| Semester | Term | Term Credits |
|---|---|---|
| 1st Semester | Fall | 16 |

**Courses**
- ACA122 - College Transfer Success

**Term Credits** 1

**Courses**
- BPR130 - Print Reading-Construction

**Term Credits** 3

**Courses**
- CST111 - Construction I

**Term Credits** 4

**Courses**
- CST131 - OSHA/Safety/Certification

**Term Credits** 3

**Courses**
- MAS140 - Introduction to Masonry

**Term Credits** 2

**Courses**
- MAT110 - Mathematical Measurement and Literacy

**OR**
- MAT143 - Quantitative Literacy

**Term Credits** 3

| Semester | Term | Term Credits |
|---|---|---|
| 2nd Semester | Spring | 16 |

**Courses**
- CST112 - Construction II

**Term Credits** 4

**Courses**
- CST241 - Planning/Estimating I

**Term Credits** 3

**Courses**
- CMT120 - Codes and Inspections

**Term Credits** 3

**Courses**
- ELC113 - Residential Wiring

**Term Credits** 4

**Courses**
- PLU111 - Introduction to Basic Plumbing

**Term Credits** 2

| Semester | Term | Term Credits |
|---|---|---|
| 3rd Semester | Summer | 7 |

**Courses**
- CST113 - Construction III

**Term Credits** 4

**Courses**
- ENG111 - Writing and Inquiry

**Term Credits** 3

| Semester | Term | Term Credits |
|---|---|---|
| 4th Semester | Fall | 16 |

**Courses**
- CST221 - Statics/Structures

**Term Credits** 4

**Courses**
- SST120 - Energy Use Analysis

**Term Credits** 3

**Courses**
- SST140 - Green Building and Design Concepts

**Term Credits** 3

**Courses**
- Humanities/Fine Arts Elective (Generic)

**Term Credits** 3

**Courses**
- ENG112 - Writing and Research in the Disciplines

**OR**
- ENG114 - Professional Research & Reporting

**OR**
- COM120 - Introduction to Interpersonal Communication

**Term Credits** 3

| Semester | Term | Term Credits |
|---|---|---|
| 5th Semester | Spring | 14 |

**Courses**
- ARC111 - Introduction to Architectural Technology

**Term Credits** 3

**Courses**
- BUS280 - REAL Small Business

**Term Credits** 4

**Courses**
- CST150 - Building Science

**Term Credits** 3

**Courses**
- WBL111 - Work-Based Learning I

**Term Credits** 1

**Courses**
- Social/Behavioral Science Elective (Generic)

**Term Credits** 3

## Approved AAS Electives

**Approved AAS Electives (C-L-SHC)**

| APPROVED HUMANITIES/FINE ARTS ELECTIVES | APPROVED SOCIAL/BEHAVIORAL SCIENCE ELECTIVES |
|---|---|
| ART 111 Art Appreciation 3-0-3<br>ART 114 Art History Survey I 3-0-3<br>ART 115 Art History Survey II 3-0-3<br>DRA 111 Theatre Appreciation 3-0-3<br>ENG 125 Creative Writing I 3-0-3<br>ENG 231 American Literature I 3-0-3<br>ENG 232 American Literature II 3-0-3<br>*ENG 241 British Literature I 3-0-3<br>*ENG 242 British Literature II 3-0-3<br>HUM 110 Technology and Society 3-0-3<br>HUM 115 Critical Thinking 3-0-3<br>HUM 120 Cultural Studies 3-0-3<br>HUM 122 Southern Culture 3-0-3<br>HUM 150 American Women's Studies 3-0-3<br>HUM 160 Introduction to Film 2-2-3<br>MUS 110 Music Appreciation 3-0-3<br>MUS 112 Introduction to Jazz 3-0-3<br>PHI 240 Introduction to Ethics 3-0-3<br>REL 110 World Religions 3-0-3<br>REL 211 Intro to Old Testament 3-0-3<br>REL 212 Intro to New Testament 3-0-3<br>*Not applicable for some health sciences programs.* | ANT 210 General Anthropology 3-0-3<br>ANT 220 Cultural Anthropology 3-0-3<br>ECO 151 Survey of Economics 3-0-3<br>ECO 251 Principles of Microeconomics 3-0-3<br>ECO 252 Principles of Macroeconomics 3-0-3<br>HIS 111 World Civilization I 3-0-3<br>HIS 112 World Civilization II 3-0-3<br>HIS 131 American History I 3-0-3<br>HIS 132 American History II 3-0-3<br>HIS 222 African-American History I 3-0-3<br>HIS 223 African-American History II 3-0-3<br>HIS 226 The Civil War 3-0-3<br>HIS 236 North Carolina History 3-0-3<br>POL 120 American Government 3-0-3<br>PSY 150 General Psychology 3-0-3<br>PSY 237 Social Psychology 3-0-3<br>PSY 241 Developmental Psychology 3-0-3<br>PSY 246 Adolescent Psychology 3-0-3<br>PSY 281 Abnormal Psychology 3-0-3<br>SOC 210 Introduction to Sociology 3-0-3<br>SOC 213 Sociology of the Family 3-0-3<br>SOC 220 Social Problems 3-0-3<br>SOC 225 Social Diversity 3-0-3<br>SOC 232 Social Context of Aging 3-0-3<br>SOC 240 Social Psychology 3-0-3 |

# A40160 - Computer Engineering Technology AAS

## Overview

**Program Code**
A40160

**Program Description**
Pathway Description: These curriculums are designed to prepare students through the study and application of principles from mathematics, natural sciences, and technology and applied processes based on these subjects. Course work includes mathematics, natural sciences, engineering sciences and technology. Graduates should qualify to obtain occupations such as technical service providers, materials and technologies testing services, process improvement technicians, engineering technicians, construction technicians and managers, industrial and technology managers, or research technicians

Computer Engineering Technology: A course of study that prepares the students to use basic engineering principles and technical skills for installing, servicing, and maintaining computers, peripherals, networks, and microprocessor and computer controlled equipment. Includes instruction in mathematics, computer electronics and programming, prototype development and testing, systems installation and testing, solid state and microminiature circuitry, peripheral equipment, and report preparation. Graduates should qualify for employment opportunities in electronics technology, computer service, computer networks, server maintenance, programming, and other areas requiring knowledge of electronic and computer systems. Graduates may also qualify for certification in electronics, computers, or networks.

**Career Pathway Options**
Associate of Applied Science Degree in Computer Engineering Technology

**Career Community**
STEM

**Program Length**
5 semesters

**Credential**
Associate in Applied Science

## Program Outcomes

## Degree Maps

Computer Engineering Technology, Associate in Applied Science
**Total Credits**
69

| Semester | Term | Term Credits |
|---|---|---|
| 1st Semester | Fall | 14 |

**Courses**
- ACA122 - College Transfer Success

**Term Credits** 1

**Courses**
- EGR131 - Introduction to Electronics Technology

**Term Credits** 2

**Courses**
- ELC131 - Circuit Analysis I

**Term Credits** 4

**Courses**
- ENG111 - Writing and Inquiry

**Term Credits** 3

**Courses**
- MAT171 - Precalculus Algebra
  **OR**
- MAT121 - Algebra/Trigonometry I

**Term Credits** 4

| Semester | Term | Term Credits |
|---|---|---|

| 2nd Semester | Spring | 18 |
|---|---|---|

**Courses**
- ELN131 - Analog Electronics I

**Term Credits** 4

**Courses**
- ELN133 - Digital Electronics

**Term Credits** 4

**Courses**
- NOS130 - Windows Single User

**Term Credits** 3

**Courses**
- MAT122 - Algebra/Trigonometry II

**OR**
- MAT172 - Precalculus Trigonometry

**Term Credits** 3

**Courses**
- PHY131 - Physics-Mechanics

**OR**
- PHY151 - College Physics I

**Term Credits** 4

| Semester | Term | Term Credits |
|---|---|---|
| 3rd Semester | Summer | 7 |

**Courses**
- ELN132 - Analog Electronics II

**Term Credits** 4

**Courses**
- Communications requirement (Generic)

**Term Credits** 3

| Semester | Term | Term Credits |
|---|---|---|
| 4th Semester | Fall | 17 |

**Courses**
- CET225 - Digital Signal Processing

**Term Credits** 3

**Courses**
- CTS120 - Hardware/Software Support

**Term Credits** 3

**Courses**
- ELN232 - Introduction to Microprocessors

**Term Credits** 4

**Courses**
- PCI170 - DAQ and Control

**Term Credits** 4

**Courses**
- Programming Elective (Generic)

**Term Credits** 3

| Semester | Term | Term Credits |
|---|---|---|
| 5th Semester | Spring | 13 |

**Courses**
- CTI120 - Network and Security Foundations

**Term Credits** 3

**Courses**
- ELN275 - Troubleshooting

**Term Credits** 2

**Courses**
- Humanities/Fine Arts requirement (Generic)

**Term Credits** 3

**Courses**
- Social/Behavioral Science requirement (Generic)

**Term Credits** 3

**Courses**
- Technical Elective (Generic)

**Term Credits** 2

## Approved AAS Electives

**Approved AAS Electives (C-L-SHC)**

| APPROVED HUMANITIES/FINE ARTS ELECTIVES | APPROVED SOCIAL/BEHAVIORAL SCIENCE ELECTIVES |
|---|---|
| ART 111 Art Appreciation 3-0-3<br>ART 114 Art History Survey I 3-0-3<br>ART 115 Art History Survey II 3-0-3<br>DRA 111 Theatre Appreciation 3-0-3<br>ENG 125 Creative Writing I 3-0-3<br>ENG 231 American Literature I 3-0-3<br>ENG 232 American Literature II 3-0-3<br>*ENG 241 British Literature I 3-0-3<br>*ENG 242 British Literature II 3-0-3<br>HUM 110 Technology and Society 3-0-3<br>HUM 115 Critical Thinking 3-0-3<br>HUM 120 Cultural Studies 3-0-3<br>HUM 122 Southern Culture 3-0-3<br>HUM 150 American Women's Studies 3-0-3<br>HUM 160 Introduction to Film 2-2-3<br>MUS 110 Music Appreciation 3-0-3<br>MUS 112 Introduction to Jazz 3-0-3<br>PHI 240 Introduction to Ethics 3-0-3<br>REL 110 World Religions 3-0-3<br>REL 211 Intro to Old Testament 3-0-3<br>REL 212 Intro to New Testament 3-0-3<br>*Not applicable for some health sciences programs.* | ANT 210 General Anthropology 3-0-3<br>ANT 220 Cultural Anthropology 3-0-3<br>ECO 151 Survey of Economics 3-0-3<br>ECO 251 Principles of Microeconomics 3-0-3<br>ECO 252 Principles of Macroeconomics 3-0-3<br>HIS 111 World Civilization I 3-0-3<br>HIS 112 World Civilization II 3-0-3<br>HIS 131 American History I 3-0-3<br>HIS 132 American History II 3-0-3<br>HIS 222 African-American History I 3-0-3<br>HIS 223 African-American History II 3-0-3<br>HIS 226 The Civil War 3-0-3<br>HIS 236 North Carolina History 3-0-3<br>POL 120 American Government 3-0-3<br>PSY 150 General Psychology 3-0-3<br>PSY 237 Social Psychology 3-0-3<br>PSY 241 Developmental Psychology 3-0-3<br>PSY 246 Adolescent Psychology 3-0-3<br>PSY 281 Abnormal Psychology 3-0-3<br>SOC 210 Introduction to Sociology 3-0-3<br>SOC 213 Sociology of the Family 3-0-3<br>SOC 220 Social Problems 3-0-3<br>SOC 225 Social Diversity 3-0-3<br>SOC 232 Social Context of Aging 3-0-3<br>SOC 240 Social Psychology 3-0-3 |

# A40200 - Electronics Engineering Technology AAS

## Overview

**Program Code**
A40200

**Program Description**
This curriculum is designed to prepare students through the study and application of principles from mathematics, natural sciences, and technology and applied processes based on these subjects.

Course work includes mathematics, natural sciences, engineering sciences and technology.

Graduates should qualify to obtain occupations such as technical service providers, materials and technologies testing services, process improvement technicians, engineering technicians, construction technicians and managers, industrial and technology managers, or research technicians.

This course of study prepares the students to apply basic engineering principles and technical skills to become technicians who design, build, install, test, troubleshoot, repair, and modify developmental and production electronic components, equipment, and systems such as industrial/computer controls, manufacturing systems, communication systems, and power electronic systems. Includes instruction in mathematics, basic electricity, solid-state fundamentals, digital concepts, and microprocessors or programmable logic controllers.

Graduates should qualify for employment as electronics engineering technician, field service technician, instrumentation technician, maintenance technician, electronic tester, electronic systems integrator, bench technician, and production control technician.

**Career Pathway Options**
Associate in Applied Science Degree in Electronics Engineering Technology

**Career Community**
STEM

**Program Length**
5 semesters

**Credential**
Associate in Applied Science

## Program Outcomes

## Degree Maps

Electronics Engineering Technology, Associate in Applied Science Degree
**Total Credits**
71

| Semester | Term | Term Credits |
|---|---|---|
| 1st Semester | Fall | 17 |

**Courses**
- ACA122 - College Transfer Success

**Term Credits** 1

**Courses**
- CIS110 - Introduction to Computers

**Term Credits** 3

**Courses**
- EGR131 - Introduction to Electronics Technology

**Term Credits** 2

**Courses**
- ELC131 - Circuit Analysis I

**Term Credits** 4

**Courses**
- ENG111 - Writing and Inquiry

**Term Credits** 3

**Courses**
- MAT171 - Precalculus Algebra

**OR**
- MAT121 - Algebra/Trigonometry I

**Term Credits** 4

| Semester | Term | Term Credits |
|---|---|---|
| 2nd Semester | Spring | 16 |

**Courses**
- ELN131 - Analog Electronics I

**Term Credits** 4

**Courses**
- ELN133 - Digital Electronics

**Term Credits** 4

**Courses**
- MAT172 - Precalculus Trigonometry

**OR**
- MAT122 - Algebra/Trigonometry II

**Term Credits** 4

**Courses**
- Physics (Generic)

**Term Credits** 4

| Semester | Term | Term Credits |
|---|---|---|
| 3rd Semester | Summer | 8 |

**Courses**
- ELN132 - Analog Electronics II

**Term Credits** 4

**Courses**
- PHY151 - College Physics I

**OR**
- PHY131 - Physics-Mechanics

**Term Credits** 4

| Semester | Term | Term Credits |
|---|---|---|
| 4th Semester | Fall | 17 |

**Courses**
- CET225 - Digital Signal Processing

**Term Credits** 3

**Courses**
- ELN232 - Introduction to Microprocessors

**Term Credits** 4

**Courses**
- PCI170 - DAQ and Control

**Term Credits** 4

**Courses**
- Communications requirement (Generic)

**Term Credits** 3

**Courses**
- Social/Behavioral Science requirement (Generic)

**Term Credits** 3

| Semester | Term | Term Credits |
|---|---|---|
| 5th Semester | Spring | 13 |

**Courses**
- ELN247 - Electronic App Project

**Term Credits** 2

**Courses**
- ELN275 - Troubleshooting

**Term Credits** 2

**Courses**
- ISC221 - Statistical Quality Control

**Term Credits** 3

**Courses**
- ELC128 - Introduction to Programmable Logic Controller

**Term Credits** 3

**Courses**
- Humanities/Fine Arts requirement (Generic)

**Term Credits** 3

**Courses**
- Technical Elective (Generic)

**Term Credits** -

## Approved AAS Electives

**Approved AAS Electives (C-L-SHC)**

| APPROVED HUMANITIES/FINE ARTS ELECTIVES | APPROVED SOCIAL/BEHAVIORAL SCIENCE ELECTIVES |
|---|---|
| ART 111 Art Appreciation 3-0-3 | ANT 210 General Anthropology 3-0-3 |
| ART 114 Art History Survey I 3-0-3 | ANT 220 Cultural Anthropology 3-0-3 |
| ART 115 Art History Survey II 3-0-3 | ECO 151 Survey of Economics 3-0-3 |
| DRA 111 Theatre Appreciation 3-0-3 | ECO 251 Principles of Microeconomics 3-0-3 |
| ENG 125 Creative Writing I 3-0-3 | ECO 252 Principles of Macroeconomics 3-0-3 |
| ENG 231 American Literature I 3-0-3 | HIS 111 World Civilization I 3-0-3 |
| ENG 232 American Literature II 3-0-3 | HIS 112 World Civilization II 3-0-3 |
| *ENG 241 British Literature I 3-0-3 | HIS 131 American History I 3-0-3 |
| *ENG 242 British Literature II 3-0-3 | HIS 132 American History II 3-0-3 |
| HUM 110 Technology and Society 3-0-3 | HIS 222 African-American History I 3-0-3 |
| HUM 115 Critical Thinking 3-0-3 | HIS 223 African-American History II 3-0-3 |
| HUM 120 Cultural Studies 3-0-3 | HIS 226 The Civil War 3-0-3 |
| HUM 122 Southern Culture 3-0-3 | HIS 236 North Carolina History 3-0-3 |
| HUM 150 American Women's Studies 3-0-3 | POL 120 American Government 3-0-3 |
| HUM 160 Introduction to Film 2-2-3 | PSY 150 General Psychology 3-0-3 |
| MUS 110 Music Appreciation 3-0-3 | PSY 237 Social Psychology 3-0-3 |
| MUS 112 Introduction to Jazz 3-0-3 | PSY 241 Developmental Psychology 3-0-3 |
| PHI 240 Introduction to Ethics 3-0-3 | PSY 246 Adolescent Psychology 3-0-3 |
| REL 110 World Religions 3-0-3 | PSY 281 Abnormal Psychology 3-0-3 |
| REL 211 Intro to Old Testament 3-0-3 | SOC 210 Introduction to Sociology 3-0-3 |
| REL 212 Intro to New Testament 3-0-3 | SOC 213 Sociology of the Family 3-0-3 |
| | SOC 220 Social Problems 3-0-3 |
| | SOC 225 Social Diversity 3-0-3 |
| | SOC 232 Social Context of Aging 3-0-3 |
| *Not applicable for some health sciences programs.* | SOC 240 Social Psychology 3-0-3 |

# A40280 - Laser and Photonics Technology AAS

## Overview

**Program Code**
A40280

**Program Description**
Pathway Description: These curriculums are designed to prepare students through the study and application of principles from mathematics, natural sciences, and technology and applied processes based on these subjects. Course work includes mathematics, natural sciences, engineering sciences and technology. Graduates should qualify to obtain occupations such as technical service providers, materials and technologies testing services, process improvement technicians, engineering technicians, construction technicians and managers, industrial and technology managers, or research technicians

Laser and Photonics Technology: A course of study that prepares the students to apply basic engineering principles and technical skills for specifying, operating, and maintaining laser-based systems. Includes instruction in mathematics, science, communications, electronics, and optics courses emphasizing laboratory learning experiences that develops the hands-on skills needed. Graduates of the curriculum qualify for current and emerging employment opportunities in fiber optic communications, materials processing, laser surgery, research, and a variety of related fields.

**Career Pathway Options**
Associate in Applied Science in Laser and Photonics Technology

**Career Community**
STEM

**Program Length**
5 semesters

**Credential**
Associate in Applied Science

## Program Outcomes

## Degree Maps

Laser & Photonics Technology, Associate in Applied Science Degree
**Total Credits**
76

| Semester | Term | Term Credits |
|---|---|---|
| 1st Semester | Fall | 17 |

**Courses**
- ACA122 - College Transfer Success

**Term Credits** 1

**Courses**
- CIS110 - Introduction to Computers

**Term Credits** 3

**Courses**
- EGR131 - Introduction to Electronics Technology

**Term Credits** 2

**Courses**
- ELC131 - Circuit Analysis I

**Term Credits** 4

**Courses**
- ENG111 - Writing and Inquiry

**Term Credits** 3

**Courses**
- MAT171 - Precalculus Algebra
  **OR**
- MAT121 - Algebra/Trigonometry I

**Term Credits** 4

| Semester | Term | Term Credits |
|---|---|---|
| 2nd Semester | Spring | 16 |

**Courses**
- ELC127 - Software for Technicians

**Term Credits** 2

**Courses**
- ELN131 - Analog Electronics I

**Term Credits** 4

**Courses**
- ELN133 - Digital Electronics

**Term Credits** 4

**Courses**
- LEO111 - Lasers and Applications

**Term Credits** 2

**Courses**
- MAT172 - Precalculus Trigonometry
  **OR**
- MAT122 - Algebra/Trigonometry II

**Term Credits** 4

| Semester | Term | Term Credits |
|---|---|---|
| 3rd Semester | Summer | 8 |

**Courses**
- ELN132 - Analog Electronics II

**Term Credits** 4

**Courses**
- Physics, select from PHY 131 or PHY 151 (Generic)

**Term Credits** 4

| Semester | Term | Term Credits |
|---|---|---|
| 4th Semester | Fall | 19 |

**Courses**
- ELN275 - Troubleshooting

**Term Credits** 2

**Courses**
- LEO211 - Photonics Technology

**Term Credits** 7

**Courses**
- LEO212 - Photonics Applications

**Term Credits** 4

**Courses**
- Communications requirement (Generic)

**Term Credits** 3

**Courses**
- Humanities/Fine Arts requirements (Generic)

**Term Credits** 3

| Semester | Term | Term Credits |
|---|---|---|
| 5th Semester | Spring | 16 |

**Courses**
- ELN232 - Introduction to Microprocessors

**Term Credits** 4

**Courses**
- ISC221 - Statistical Quality Control

**Term Credits** 3

**Courses**
- LEO213 - Advanced Photonic Applications

**Term Credits** 4

**Courses**
- Social/Behavioral Science requirement (Generic)

**Term Credits** 3

**Courses**
- LEO222 - Photonics Applications Project
  **OR**
- WBL111 - Work-Based Learning I
  **OR**
- WBL121 - Work-Based Learning II
  **OR**
- WBL122 - Work-Based Learning II

**Term Credits** 2

## Approved AAS Electives

**Approved AAS Electives (C-L-SHC)**

| APPROVED HUMANITIES/FINE ARTS ELECTIVES | APPROVED SOCIAL/BEHAVIORAL SCIENCE ELECTIVES |
|---|---|
| ART 111 Art Appreciation 3-0-3<br>ART 114 Art History Survey I 3-0-3<br>ART 115 Art History Survey II 3-0-3<br>DRA 111 Theatre Appreciation 3-0-3<br>ENG 125 Creative Writing I 3-0-3<br>ENG 231 American Literature I 3-0-3<br>ENG 232 American Literature II 3-0-3<br>*ENG 241 British Literature I 3-0-3<br>*ENG 242 British Literature II 3-0-3<br>HUM 110 Technology and Society 3-0-3<br>HUM 115 Critical Thinking 3-0-3<br>HUM 120 Cultural Studies 3-0-3<br>HUM 122 Southern Culture 3-0-3<br>HUM 150 American Women's Studies 3-0-3<br>HUM 160 Introduction to Film 2-2-3<br>MUS 110 Music Appreciation 3-0-3<br>MUS 112 Introduction to Jazz 3-0-3<br>PHI 240 Introduction to Ethics 3-0-3<br>REL 110 World Religions 3-0-3<br>REL 211 Intro to Old Testament 3-0-3<br>REL 212 Intro to New Testament 3-0-3<br>*Not applicable for some health sciences programs.* | ANT 210 General Anthropology 3-0-3<br>ANT 220 Cultural Anthropology 3-0-3<br>ECO 151 Survey of Economics 3-0-3<br>ECO 251 Principles of Microeconomics 3-0-3<br>ECO 252 Principles of Macroeconomics 3-0-3<br>HIS 111 World Civilization I 3-0-3<br>HIS 112 World Civilization II 3-0-3<br>HIS 131 American History I 3-0-3<br>HIS 132 American History II 3-0-3<br>HIS 222 African-American History I 3-0-3<br>HIS 223 African-American History II 3-0-3<br>HIS 226 The Civil War 3-0-3<br>HIS 236 North Carolina History 3-0-3<br>POL 120 American Government 3-0-3<br>PSY 150 General Psychology 3-0-3<br>PSY 237 Social Psychology 3-0-3<br>PSY 241 Developmental Psychology 3-0-3<br>PSY 246 Adolescent Psychology 3-0-3<br>PSY 281 Abnormal Psychology 3-0-3<br>SOC 210 Introduction to Sociology 3-0-3<br>SOC 213 Sociology of the Family 3-0-3<br>SOC 220 Social Problems 3-0-3<br>SOC 225 Social Diversity 3-0-3<br>SOC 232 Social Context of Aging 3-0-3<br>SOC 240 Social Psychology 3-0-3 |

# A40320 - Mechanical Engineering Technology AAS

## Overview

**Program Code**
A40320

**Program Description**
Pathway Description: These curriculums are designed to prepare students through the study and application of principles from mathematics, natural sciences, and technology and applied processes based on these subjects.

Course work includes mathematics, natural sciences, engineering sciences and technology.

Graduates should qualify to obtain occupations such as technical service providers, materials and technologies testing services, process improvement technicians, engineering technicians, industrial and technology managers, or research technicians.

Mechanical Engineering Technology: A course of study that prepares the students to use basic engineering principles and technical skills to design, develop, test, and troubleshoot projects involving mechanical systems. Includes instruction in principles of mechanics, applications to specific engineering systems, design testing procedures, prototype and operational testing and inspection procedures, manufacturing system-testing procedures, test equipment operation and maintenance, computer applications, critical thinking, planning and problem solving, and oral and written communications. Graduates of the curriculum will 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.

**Career Community**
STEM

**Program Length**
5 semesters

**Credential**
Associate in Applied Science

## Program Outcomes

## Degree Maps

Mechanical Engineering Technology, Associate in Applied Science Degree
**Total Credits**
71

| Semester | Term | Term Credits |
|---|---|---|
| 1st Semester | Fall | 13 |

**Courses**
- ACA122 - College Transfer Success

**Term Credits** 1

**Courses**
- DFT154 - Introduction to Solid Modeling

**Term Credits** 3

**Courses**
- MEC180 - Engineering Materials

**Term Credits** 3

**Courses**
- CIS110 - Introduction to Computers

**Term Credits** 3

**Courses**
- MAT121 - Algebra/Trigonometry I
  **OR**
- MAT171 - Precalculus Algebra

**Term Credits** 3

| Semester | Term | Term Credits |
|---|---|---|
| 2nd Semester | Spring | 17 |

**Courses**
- DFT151 - CAD I

**Term Credits** 3

**Courses**
- DDF211 - Design Process I

**Term Credits** 4

**Courses**
- DFT254 - Intermediate Solid Modeling & Rendering

**Term Credits** 3

**Courses**
- MAT122 - Algebra/Trigonometry II
  **OR**
- MAT172 - Precalculus Trigonometry

**Term Credits** 3

**Courses**
- PHY131 - Physics-Mechanics
  **OR**
- PHY151 - College Physics I

**Term Credits** 4

| Semester | Term | Term Credits |
|---|---|---|
| 3rd Semester | Summer | 9 |

**Courses**
- ENG111 - Writing and Inquiry

**Term Credits** 3

**Courses**
- HYD110 - Hydraulics/Pneumatics I

**Term Credits** 3

**Courses**
- Social/Behavioral Science requirement (Generic)

**Term Credits** 3

| Semester | Term | Term Credits |
|---|---|---|
| 4th Semester | Fall | 18 |

**Courses**
- DDF212 - Design Process II

**Term Credits** 4

**Courses**
- DFT152 - CAD II

**Term Credits** 3

**Courses**
- EGR250 - Statics/Strength of Mater

**Term Credits** 5

**Courses**
- MEC111 - Machine Processes I

**Term Credits** 3

**Courses**
- Communications requirement (Generic)

**Term Credits** 3

| Semester | Term | Term Credits |
|---|---|---|
| 5th Semester | Spring | 14 |

**Courses**
- DFT153 - CAD III

**Term Credits** 3

**Courses**
- EGR285 - Design Project

**Term Credits** 2

**Courses**
- MEC161 - Manufacturing Processes I

**Term Credits** 3

**Courses**
- MEC275 - Engineering Mechanisms

**Term Credits** 3

**Courses**
- Humanities/Fine Arts requirement (Generic)

**Term Credits** 3

## Approved AAS Electives

**Approved AAS Electives (C-L-SHC)**

| APPROVED HUMANITIES/FINE ARTS ELECTIVES | APPROVED SOCIAL/BEHAVIORAL SCIENCE ELECTIVES |
|---|---|
| ART 111 Art Appreciation 3-0-3<br>ART 114 Art History Survey I 3-0-3<br>ART 115 Art History Survey II 3-0-3<br>DRA 111 Theatre Appreciation 3-0-3<br>ENG 125 Creative Writing I 3-0-3<br>ENG 231 American Literature I 3-0-3<br>ENG 232 American Literature II 3-0-3<br>*ENG 241 British Literature I 3-0-3<br>*ENG 242 British Literature II 3-0-3<br>HUM 110 Technology and Society 3-0-3<br>HUM 115 Critical Thinking 3-0-3<br>HUM 120 Cultural Studies 3-0-3<br>HUM 122 Southern Culture 3-0-3<br>HUM 150 American Women's Studies 3-0-3<br>HUM 160 Introduction to Film 2-2-3<br>MUS 110 Music Appreciation 3-0-3<br>MUS 112 Introduction to Jazz 3-0-3<br>PHI 240 Introduction to Ethics 3-0-3<br>REL 110 World Religions 3-0-3<br>REL 211 Intro to Old Testament 3-0-3<br>REL 212 Intro to New Testament 3-0-3<br>**Not applicable for some health sciences programs.* | ANT 210 General Anthropology 3-0-3<br>ANT 220 Cultural Anthropology 3-0-3<br>ECO 151 Survey of Economics 3-0-3<br>ECO 251 Principles of Microeconomics 3-0-3<br>ECO 252 Principles of Macroeconomics 3-0-3<br>HIS 111 World Civilization I 3-0-3<br>HIS 112 World Civilization II 3-0-3<br>HIS 131 American History I 3-0-3<br>HIS 132 American History II 3-0-3<br>HIS 222 African-American History I 3-0-3<br>HIS 223 African-American History II 3-0-3<br>HIS 226 The Civil War 3-0-3<br>HIS 236 North Carolina History 3-0-3<br>POL 120 American Government 3-0-3<br>PSY 150 General Psychology 3-0-3<br>PSY 237 Social Psychology 3-0-3<br>PSY 241 Developmental Psychology 3-0-3<br>PSY 246 Adolescent Psychology 3-0-3<br>PSY 281 Abnormal Psychology 3-0-3<br>SOC 210 Introduction to Sociology 3-0-3<br>SOC 213 Sociology of the Family 3-0-3<br>SOC 220 Social Problems 3-0-3<br>SOC 225 Social Diversity 3-0-3<br>SOC 232 Social Context of Aging 3-0-3<br>SOC 240 Social Psychology 3-0-3 |

# A45110 - Associate Degree Nursing

## Overview

**Program Code**
A45110

**Program Description**
The 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.

Course work 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). Employment opportunities are vast within the global health care system and may include positions within acute, chronic, extended, industrial, and community health care facilities.

**Career Pathway Options**
Associate in Applied Science Degree in Associate Degree Nursing, RN to BSN Articulation

**Career Community**
Health Sciences

**Program Length**
5 semesters

**Credential**
Associate in Applied Science

## Program Outcomes

## Degree Maps

Associates Degree Nursing, Associate in Applied Science

**Total Credits**
70

| Semester | Term | Term Credits |
|---|---|---|
| 1st Semester | Fall | 19 |

**Courses**
- ACA122 - College Transfer Success

**Term Credits** 1

**Courses**
- BIO168 - Anatomy and Physiology I

**Term Credits** 4

**Courses**
- ENG111 - Writing and Inquiry

**Term Credits** 3

**Courses**
- NUR111 - Introduction to Health Concepts

**Term Credits** 8

**Courses**
- PSY150 - General Psychology

**Term Credits** 3

| Semester | Term | Term Credits |
|---|---|---|
| 2nd Semester | Spring | 17 |

**Courses**
- BIO169 - Anatomy and Physiology II

**Term Credits** 4

**Courses**

- NUR112 - Health-Illness Concepts

**Term Credits** 5

**Courses**

- NUR113 - Family Health Concepts

**Term Credits** 5

**Courses**

- PSY241 - Developmental Psychology

**Term Credits** 3

| Semester | Term | Term Credits |
|---|---|---|
| 3rd Semester | Summer | 5 |

**Courses**

- NUR114 - Holistic Health Concepts

**Term Credits** 5

| Semester | Term | Term Credits |
|---|---|---|
| 4th Semester | Fall | 16 |

**Courses**

- NUR211 - Health Care Concepts

**Term Credits** 5

**Courses**

- NUR212 - Health System Concepts

**Term Credits** 5

**Courses**

- SOC210 - Introduction to Sociology

**Term Credits** 3

**Courses**

- ENG112 - Writing and Research in the Disciplines
  **OR**
- ENG114 - Professional Research & Reporting

**Term Credits** 3

| Semester | Term | Term Credits |
|---|---|---|
| 5th Semester | Spring | 13 |

**Courses**

- NUR213 - Complex Health Concepts

**Term Credits** 10

**Courses**

- Humanities/Fine Arts Elective (online or seated**) (Generic)

**Term Credits** 3

## Limited Enrollment Program Information

**A. PROGRAM SPECIFIC ENTRANCE STANDARDS:**

**Admission**

A student may apply to the Associate Degree Nursing Program once minimum admissions criteria are met.

Prospective applicants are required to complete the Health Sciences information session as well as contact their Education Navigator prior to developing a plan for completing minimum requirements. The Education Navigator will review each applicant's progress, and provide further guidance once all minimum admission requirements are met.

Once an applicant has completed all general admissions criteria and all Associate Degree Nursing Program entrance requirements, they must submit a completed Limited Enrollment Application. Applicants who meet all requirements will be ranked according to the order in which they applied.

During the initial consideration, applicants will have an opportunity to indicate first and second choice programs when completing the Limited Enrollment Application. If seats do not fill after the initial consideration and after second choice candidates are considered, applicants will be admitted on a first qualified, first accepted basis up until the date of the required mandatory health science orientation.

Applicants who do not gain entry but want to gain entry in a future year do not need to resubmit their application. Applicants will remain on the active applicant list as long as they are interested in being considered for the program.

Applicants must also submit a completed "Statement of Good Standing Form" explaining the circumstances of any previous exit from any health science program. The letter must be sent from the program director at the time of the student's previous enrollment. CCCC's Nursing Department Chair and Vice President of Student Services must approve students who were dismissed, expelled, or suspended for any reason. Students who withhold previous exit information may be dismissed from the program.

It is the applicant's responsibility to ensure that requirements are met by the established deadline.

More information can be found on the Limited Enrollment Website.

**Placement Test Scores**

Students must be eligible to take their gateway Math and English course in order to be eligible to apply. This can be achieved through a High School Unweighted GPA of 2.6 or higher or by presenting acceptable test scores such as SAT, ACT, Accuplacer,, or other acceptable scores

The checklist for the Associate Degree Nursing Program indicates the minimum scores required to place into ENG 111 and MAT 110. Students who have an unweighted high school GPA of 2.6 or higher, have met Multiple Measures for Placement or who have earned appropriate transfer credit in English, Math, or developmental courses with a C, P2 for English, or P1 for Math, or higher may be exempt from placement testing.

**GPA**

Students must be in good academic standing upon applying to health science programs. Good academic standing is defined as having a 2.8 GPA or higher based on the general education courses for the program. Students can apply if they have a 2.5-2.8 GPA but will be placed on an alternate list. Alternates will be considered if there are not enough applicants to fill all seats. These GPA requirements must be maintained at the time of entering the program from a secondary or post-secondary institution.

**TEAS (Test of Essential Academic Skills)**

All required college placement tests or developmental courses must be successfully completed before the applicant may attempt the Test of Essential Academic Skills (TEAS). Students must obtain approval from an Education Navigator to take the TEAS and pay the required testing fee.

The TEAS will be administered on scheduled testing dates. Each applicant may take the exam three times within three years. Only the two most recent attempts will be used. Students are encouraged to complete remediation between attempts. Remediation options are as follows: developmental courses, college credit courses, and/or continuing education courses or other strategies related to the subject areas. TEAS scores are valid for three years and must be current when submitting a Nursing Program application. Students must earn an overall composite score of 65 or better, and a reading score of 70 or better to apply for the Associate Degree Nursing program.

**General Education Courses**

The following courses are required to be completed with a grade of "B" or better prior to applying: BIO-168, & BIO-169. The following courses are required to be completed with a grade of "C" or better prior to applying: ENG-111, ENG-112, PSY-150, PSY-241, SOC-210, Humanities Elective, & ACA-122.

**The Test of English as a Foreign Language (TOEFL)**

TOEFL scores are required for any naturalized or non-US citizens who speak English as their second language. This test provides evidence of adequate proficiency in the English language. All test scores must be less than five years old. The minimum acceptable TOEFL scores are based on the following formats: TOEFL iBT Total Score - **80** or higher TOEFL Essential Overall Band Score: **8** or higher. The test is offered at multiple testing sites nationally or can be taken online and is at the student's expense.

**Nurse Aide I Registry Requirement**

Prior Health Care Program completion with appropriate listing/licensure is required for consideration at the designated entry points in the nursing programs:

- Provide proof of current active listing on the North Carolina Department of Health and Human Services (NC DHHS) Nurse Aide I Registry with no substantiated finding of abuse, neglect, or misappropriation of resident property in a nursing home or other health care facility. This active, non-restricted listing must be maintained as of the start of the Associate degree Nursing Program. Candidates will need to renew their certification if it is scheduled to expire before the start of the nursing program.
- Provide proof of completion of NC state approved Nurse Aide I course (see approved schools at NCDHHS). The Department Chair of Nursing will review NAI programs completed outside of NC. NC DHHS-approved NAI courses are preferred, however the CCCC Nursing Department Chair will determine, on a case-by-case basis, if a course administered by another state or agency meets the requirement.

***OR***

High School Medical Careers I & II courses with a grade of "C" or better within the last 5 years.

***OR***

Nurse Aide I work experience of at least 250 hours with the last 6 months in skilled nursing care or in an acute care hospital. (Required to have documentation of hours worked, service rendered and supervisor's name on company letterhead.)

**B. REQUIREMENTS AFTER ACCEPTANCE:**

**Criminal Background Check/Drug Screening**

A criminal background check and drug screening will be required for all accepted Health Sciences students. Clinical affiliates will review criminal background reports and drug screenings of students and reserve the right to accept or deny any students based on their consideration of these reports. Negative reports and/or failed screenings can preclude a student from attending the clinical portion of their prescribed program and thus, will result in the student's exit from the program. Students are subject to criminal background check and drug screening at any time during a course with a clinical rotation. Clinical agencies reserve the right to require additional background checks and drug screens. Associated fees are the student's responsibility.

**Medical Forms/Immunizations**

Applicants are required to submit a completed college approved student medical health form to the required document tracking system by the assigned date. The student medical form must include satisfactory health history, physical examination, and immunization report. Failure to submit the required information by the assigned date will result in loss of Associate Degree Nursing admission status and class space will be assigned to another applicant.

**BLS Provider CPR**

CPR Certification by the American Heart Association (AHA) in BLS Provider (Basic Life Support including CPR and AED) that includes both performance and testing of criteria is required prior to clinical rotations. Students are responsible for keeping their CPR certification current throughout the duration of the program.

**Mandatory Orientation Session**

When notified of acceptance, applicants must attend a mandatory orientation session with the Nursing department.

**Liability/Malpractice Insurance**

Malpractice insurance is required for health sciences students and is assessed as a student fee.

**Transportation/Additional Class/Course Materials**

Health Sciences students are responsible for their own transportation to off-campus clinical/learning sites. Materials other than textbooks will be required and are purchased at student's expense. Students may be required to attend classes on alternate dates depending on availability of resources to meet the objectives of the course. Students will be notified in advance at the earliest possible time.

**Technical Standards**

The Health Sciences programs are physically demanding. Students will be expected to perform lifting, pushing, pulling, and carrying tasks to successfully practice in a lab setting, complete clinical affiliations, and safely treat patients. For more details, please refer to each program of study's physical requirements and technical standards.

**Board of Nursing Standards**

Students who enroll in the nursing program should be aware that the application for licensure at the completion of the program might be denied or restricted by the North Carolina Board of Nursing. As the regulatory agency, the Board of Nursing does not become involved in reviewing the applicant's conviction record until such time as application is made to take the national licensure examination. NC Board of Nursing

**Academic Standards**

Upon official acceptance, Health Sciences students are required to maintain the necessary GPA requirements for entry. Students cannot enter a Health Sciences program while on academic suspension. The nursing program requires a grade scale that is different from the general college requirement. Students must achieve a final grade of "78" or higher in every NUR course in order to remain in the Associate Degree Nursing program, and they must maintain an overall and semester grade point average of 2.0 or better. Refer to individual course syllabus for specific grading policy. Students are encouraged to earn higher grades to help ensure that they are prepared to pass the National Council Licensure Examination (NCLEX), which is required to practice as a nurse.

Students may withdraw or be withdrawn from a Health Sciences course. However, the student will not be allowed to matriculate through their program of study. Reapplication to the program will be required and readmission will be awarded based on admissions criteria completion, policy on readmission, and space availability. Students completing readmission must meet with the Education Navigator to review their file.

**Program Specific Academic Standards**

See additional Program Specific Standards in the Nursing Student Policies Handbook and specific Associate Degree Nursing course syllabus.

Associate Degree Nursing and progressive related courses must be taken in succession as they appear in the curriculum guide. Associate Degree Nursing students must adhere to the other policies set forth in the Nursing Student Policies Handbook.

**C. RE-ADMISSION, TRANSFER, OR ADVANCED STANDING INTO THE ASSOCIATE DEGREE NURSING PROGRAM**

Students applying for readmission are those who have been separated from the nursing program one year or less. The student must qualify under the admission criteria in effect at time of readmission or transfer. A grade replacement waiver may be initiated if the student needs to replace a NUR course to meet the GPA requirements for acceptance into the program. A student may be required to re-enter an Associate Degree Nursing course earlier in the curriculum sequence if the student lacks sufficient content mastery. All Associate Degree Nursing courses completed more than three years prior to readmission or transfer must be challenged by exam, including passing an assessment of all skills and/or competencies covered in that course, or the course must be repeated. Withdrawal or academic failure within the Associate Degree Nursing Program will require the student to reapply. Advanced placement is not guaranteed and dependent upon space availability. The Nursing Department Chair will evaluate transferability of all Associate Degree Nursing courses. Transfer courses must be equivalent to courses required at the receiving college in theory, lab, and clinical experiences. The student must provide copies of course syllabi and outlines for those Associate Degree Nursing courses to the department chairperson/program director. Students lacking essential content may be required to audit a portion of a course, challenge the content, demonstrate skills, or repeat the course as deemed necessary. The final decision for transfer credit for Associate Degree Nursing courses is determined by the Nursing Department Chair.

Applicants must also submit a completed "Statement of Good Standing Form" explaining the circumstances of any previous exit from any health science program. The letter must be sent from the program director at the time of the student's previous enrollment. CCCC's Nursing Department Chair and Vice President of Student Services must approve students who were dismissed, expelled, or suspended for any reason. Students who withhold previous exit information may be dismissed from the program. Students who withhold previous exit information may be dismissed from the program. Students who have been unsuccessful in two attempts in the nursing program are able to reapply for entry in the first NUR program course.

All admission and clinical requirements must be completed a minimum of 8 weeks prior to course start by the first day of the previous semester.

Additional Admission Requirements for Advanced Standing LPN to-ADN Bridge Program

1. Admission is based upon all required limited enrollment requirements for the Associate Degree Nursing program being met with the below additions and exceptions.
2. Admission is dependent on space availability at the specific point of entry determined for admission.
3. Applicants must show evidence of graduation from a state-approved school of practical nursing.
4. Provide a copy of current LPN License.
5. All applicants must complete the ATI PN Predictor assessment with a raw score of 80% or greater -at least six months after passing the NCLEX exam. The assessments can only be used for the current consideration period. The student will incur any testing expenses and may take the test only three times in a three-year period. The applicant will be referred for remediation based on a low assessment score and/or sub-scores.
6. Applicants must have successfully completed all general education courses required in the Associate Degree Nursing Program with a grade of "C" in all other general education courses, and a minimum GPA of 2.8.
7. Students may request a course exemption of ACA 122 College Transfer Success (1 semester hour) unless identified as required pre-entry remediation.
8. If an advanced placement LPN does not meet the above admission criteria and/or validation testing, they may apply for regular admission as a first-year new entry student in the Associate Degree Nursing Program.

# A45260 - Dental Hygiene AAS

## Overview

**Program Code**
A45260

**Program Description**
The Dental Hygiene curriculum provides individuals with the knowledge and skills to assess, plan, implement, and evaluate dental hygiene care for the individual and the community.

Students will learn to prepare the operatory, take patient histories, note abnormalities, plan care, teach oral hygiene, clean teeth, take x-rays, 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 dental offices, clinics, schools, public health agencies, industry, and professional education.

**Career Pathway Options**
Associate in Applied Science Degree

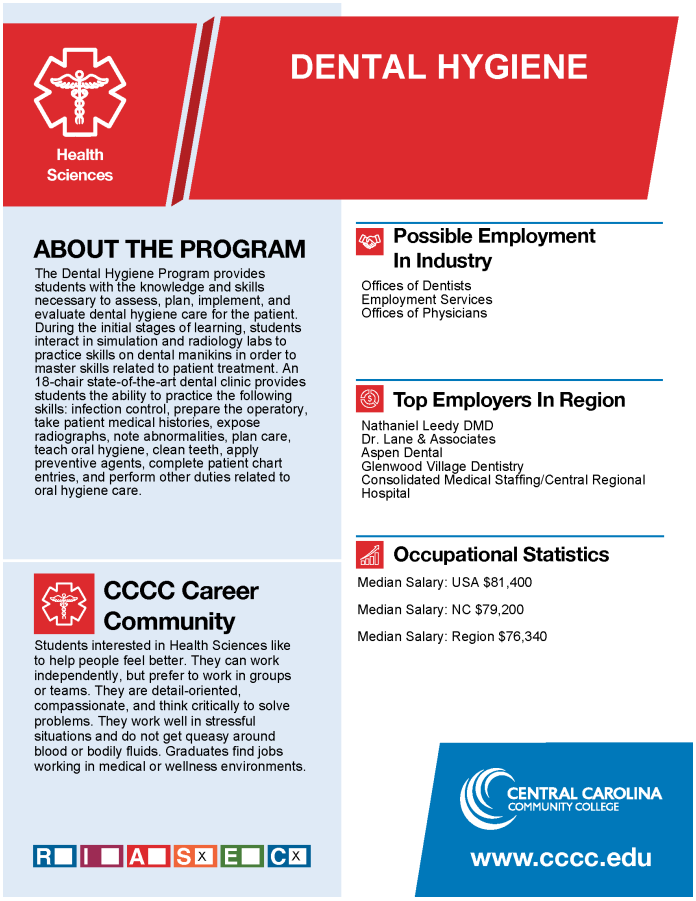
**Career Community**
Health Sciences

**Program Length**
5 semesters

**Credential**
Associate in Applied Science

## Program Information Sheet

**Program Information**




CCCC Dental Hygiene program overview with career info, possible employers, salary data, and skills learned in simulation and clinic settings. Includes Health Sciences career traits and college website link.




CCCC Dental Hygiene program details: degree offered, licensure exams, admissions info, skills in demand, limited transfer options, and contact link via QR code or www.cccc.edu/programs.

## Program Outcomes

## Degree Maps

Dental Hygiene, Associate in Applied Science

**Total Credits**

73

| Semester | Term | Term Credits |
|---|---|---|
| 1st Semester | Fall | 18 |

**Courses**
- BIO163 - Basic Anatomy & Physiology

**Term Credits** 5

**Courses**
- DEN110 - Orofacial Anatomy

**Term Credits** 3

**Courses**
- DEN111 - Infection/Hazard Control

**Term Credits** 2

**Courses**
- DEN112 - Dental Radiography

**Term Credits** 3

**Courses**
- DEN120 - Dental Hygiene Preclinic Lecture

**Term Credits** 2

**Courses**
- DEN121 - Dental Hygiene Preclinical Lab

**Term Credits** 2

**Courses**
- ACA122 - College Transfer Success

**Term Credits** 1

| Semester | Term | Term Credits |
|---|---|---|
| 2nd Semester | Spring | 17 |

**Courses**
- CHM130 - General, Organic, & Biochemistry

**Term Credits** 3

**Courses**
- CHM130A - General, Organic, & Biochemistry Lab

**Term Credits** 1

**Courses**
- DEN123 - Nutrition/Dental Health

**Term Credits** 2

**Courses**
- DEN124 - Periodontology

**Term Credits** 2

**Courses**
- DEN130 - Dental Hygiene Theory I

**Term Credits** 2

**Courses**
- DEN131 - Dental Hygiene Clinic I

**Term Credits** 3

**Courses**
- DEN223 - Dental Pharmacology

**Term Credits** 2

**Courses**
- DEN224 - Materials and Procedures

**Term Credits** 2

| Semester | Term | Term Credits |
|---|---|---|
| 3rd Semester | Summer | 8 |

**Courses**
- DEN140 - Dental Hygiene Theory II

**Term Credits** 2

**Courses**
- DEN141 - Dental Hygiene Clinic II

**Term Credits** 2

**Courses**
- DEN125 - Dental Office Emergencies

**Term Credits** 1

**Courses**
- ENG111 - Writing and Inquiry

**Term Credits** 3

| Semester | Term | Term Credits |
|---|---|---|
| 4th Semester | Fall | 17 |

**Courses**
- BIO175 - General Microbiology

**Term Credits** 3

**Courses**
- DEN220 - Dental Hygiene Theory III

**Term Credits** 2

**Courses**
- DEN221 - Dental Hygiene Clinic III

**Term Credits** 4

**Courses**
- DEN222 - General & Oral Pathology

**Term Credits** 2

**Courses**
- DEN232 - Community Dental Health

**Term Credits** 3

**Courses**
- Humanities/Fine Arts Elective (Generic)

**Term Credits** 3

| Semester | Term | Term Credits |
|---|---|---|
| 5th Semester | Spring | 13 |

**Courses**
- COM120 - Introduction to Interpersonal Communication

**Term Credits** 3

**Courses**
- DEN230 - Dental Hygiene Theory IV

**Term Credits** 1

**Courses**
- DEN231 - Dental Hygiene Clinic IV

**Term Credits** 4

**Courses**
- DEN233 - Professional Development

**Term Credits** 2

**Courses**
- SOC240 - Social Psychology

**Term Credits** 3

## Approved AAS Electives

**Approved AAS Electives (C-L-SHC)**

| APPROVED HUMANITIES/FINE ARTS ELECTIVES | APPROVED SOCIAL/BEHAVIORAL SCIENCE ELECTIVES |
|---|---|
| ART 111 Art Appreciation 3-0-3 | ANT 210 General Anthropology 3-0-3 |
| ART 114 Art History Survey I 3-0-3 | ANT 220 Cultural Anthropology 3-0-3 |
| ART 115 Art History Survey II 3-0-3 | ECO 151 Survey of Economics 3-0-3 |
| DRA 111 Theatre Appreciation 3-0-3 | ECO 251 Principles of Microeconomics 3-0-3 |
| ENG 125 Creative Writing I 3-0-3 | ECO 252 Principles of Macroeconomics 3-0-3 |
| ENG 231 American Literature I 3-0-3 | HIS 111 World Civilization I 3-0-3 |
| ENG 232 American Literature II 3-0-3 | HIS 112 World Civilization II 3-0-3 |
| *ENG 241 British Literature I 3-0-3 | HIS 131 American History I 3-0-3 |
| *ENG 242 British Literature II 3-0-3 | HIS 132 American History II 3-0-3 |
| HUM 110 Technology and Society 3-0-3 | HIS 222 African-American History I 3-0-3 |
| HUM 115 Critical Thinking 3-0-3 | HIS 223 African-American History II 3-0-3 |
| HUM 120 Cultural Studies 3-0-3 | HIS 226 The Civil War 3-0-3 |
| HUM 122 Southern Culture 3-0-3 | HIS 236 North Carolina History 3-0-3 |
| HUM 150 American Women's Studies 3-0-3 | POL 120 American Government 3-0-3 |
| HUM 160 Introduction to Film 2-2-3 | PSY 150 General Psychology 3-0-3 |
| MUS 110 Music Appreciation 3-0-3 | PSY 237 Social Psychology 3-0-3 |
| MUS 112 Introduction to Jazz 3-0-3 | PSY 241 Developmental Psychology 3-0-3 |
| PHI 240 Introduction to Ethics 3-0-3 | PSY 246 Adolescent Psychology 3-0-3 |
| REL 110 World Religions 3-0-3 | PSY 281 Abnormal Psychology 3-0-3 |
| REL 211 Intro to Old Testament 3-0-3 | SOC 210 Introduction to Sociology 3-0-3 |
| REL 212 Intro to New Testament 3-0-3 | SOC 213 Sociology of the Family 3-0-3 |
| | SOC 220 Social Problems 3-0-3 |
| *Not applicable for some health sciences programs.* | SOC 225 Social Diversity 3-0-3 |
| | SOC 232 Social Context of Aging 3-0-3 |
| | SOC 240 Social Psychology 3-0-3 |

## Limited Enrollment Program Information

**Limited Enrollment Curriculum:**

The Dental Hygiene Program is a limited enrollment curriculum. Applicants are accepted based on a selective admissions process. Criteria for admission into the Dental Hygiene Program are reviewed annually and are subject to change.

**A. PROGRAM SPECIFIC ENTRANCE STANDARDS:**

**Admissions Process:**

A student may apply to the Dental Hygiene Program once minimum admissions criteria are met.

Prospective applicants are required to complete the Health Sciences information session as well as contact their Education Navigator prior to developing a plan for completing minimum requirements . The Education Navigator will review each applicant's progress and provide further guidance once all minimum admission requirements are met.

Once an applicant has completed all general admissions criteria and all Dental Hygiene Program entrance requirements, they must submit a completed Limited Enrollment Application. Applicants who meet all requirements will be ranked according to the order in which they applied.

During the initial consideration, applicants will have an opportunity to indicate first and second choice programs when completing the Limited Enrollment Application. If seats do not fill after the initial consideration and after second choice candidates are considered, applicants will be admitted on a first qualified, first accepted basis up until the date of the required mandatory health science orientation.

Applicants must also submit a completed "Statement of Good Standing Form" explaining the circumstances of any previous exit from any health science program. The letter must be sent from the program director at the time of the student's previous enrollment. CCCC's Dental Programs Department Chair and Vice President of Student Services must approve students who were dismissed, expelled, or suspended for any reason. Students who withhold previous exit information may be dismissed from the program.

Applicants who do not gain entry but want to gain entry in a future year do not need to resubmit their application. Applicants will remain on the active applicant list as long as they are interested in being considered for the program.

It is the applicant's responsibility to ensure that requirements are met by the established deadline.

More information can be found on the Limited Enrollment Website.

**Placement Test Scores**

Students must be eligible to take their gateway Math and English course in order to be eligible to apply. This can be achieved through a High School Unweighted GPA of 2.6 or higher or by presenting acceptable test scores such as SAT, ACT, Accuplacer, or other acceptable scores

The checklist for the Dental Hygiene Program indicates the minimum scores required to place into ENG 111 and MAT 110. Students who have an unweighted high school GPA of 2.6 or higher, have met Multiple Measures for Placement or who have earned appropriate transfer credit in English, Math, or developmental courses with a C, P2 for English, or P1 for Math, or higher may be exempt from placement testing.

**GPA**

Students must be in good academic standing upon applying to health science programs. Good academic standing is defined as having a 3.0 GPA or higher based on the general education courses for the program. Students can apply if they have a 2.8-3.0 GPA but will be placed on an alternate list. Alternates will be considered if there are not enough applicants to fill all seats. These GPA requirements must be maintained at the time of entering the program from a secondary or post-secondary institution.

**General Education Courses**

The following courses are required to be completed with a grade of "B" or better prior to applying: CHM-130/130A, BIO-163, BIO-175. The following courses are required to be completed with a grade of "C" or better prior to applying: ENG-111, SOC-240, ACA-122, Communications Elective, & Humanities Elective.

**The Test of English as a Foreign Language (TOEFL)**

TOEFL scores are required for any naturalized or non-US citizens who speak English as their second language. This test provides evidence of adequate proficiency in the English language. All test scores must be less than five years old. The minimum acceptable TOEFL scores are based on the following formats: TOEFL iBT Total Score - **80** or higher

TOEFL Essential Overall Band Score: **8** or higher. The test is offered at multiple testing sites nationally or can be taken online and is at the student's expense.

**B. REQUIREMENTS AFTER ACCEPTANCE**:

**Criminal Background Check/Drug Screening**

A criminal background check and drug screening are required for all accepted Health Sciences students. Clinical affiliates will review criminal background reports and drug screenings of students and reserve the right to accept or deny any students based on their consideration of these reports. Negative reports and/or failed screenings may prevent a student from attending the clinical portion of their prescribed program. This could result in a student's withdrawal from the program. Students are subject to criminal background checks and drug screenings at any time during a clinical rotation. Clinical agencies reserve the right to require additional background checks and drug screens.

**Medical Forms/Immunizations**

Applicants are required to submit a completed college approved student medical health form to the required document tracking system by the assigned date. The student medical form must include satisfactory health history, physical examination, and immunization report. Failure to submit a completed medical form will result in loss of Dental Hygiene Program admission status and class space will be assigned to another applicant. NO student will be permitted to participate in clinic without having submitted a completed medical form.

**Hepatitis B shots (3 series shot) required through the second series prior to first Fall semester and completed by Spring semester.

**BLS Provider CPR**

CPR Certification by the American Heart Association (AHA) in BLS Provider (Basic Life Support including CPR and AED) that includes both performance and testing of criteria is required prior to clinical rotations. Students are responsible for keeping their CPR certification current throughout the duration of the program.

**Meeting with Department Chair**

Students are required to meet with the Department Chair for the program prior to the program start date.

**Mandatory Orientation Session**

When notified of acceptance, applicants must attend a mandatory orientation session with the Dental Hygiene Department.

**Liability/Malpractice Insurance**

Malpractice insurance is required for health sciences students and is assessed as a student fee.

**Transportation/Additional Class/Course Materials**

Health Sciences students are responsible for their own transportation to off-campus clinical/learning sites. Materials other than textbooks will be required and are purchased at student's expense.

**Technical Standards**

The Health Sciences Programs are physically demanding. Students will be expected to perform lifting, pushing, pulling, and carrying tasks to successfully practice in a lab setting, complete clinical affiliations, and safely treat patients. For more details, please refer to each program of study's physical requirements and technical standards.

**Communicable Disease Statement**

As a healthcare provider, students enrolled in the Dental Hygiene Program are exposed to communicable diseases. Students will be trained in standard precautions and asepsis techniques to minimize the potential of transmission. Students will act as peer patients during the program and will be expected to share medical information during clinical treatment.

**NC State Board of Dental Examiners Standards**

The application for licensure at the completion of the program might be denied or restricted by the NC State Board of Dental Examiners. Background checks are required for ALL license applications. Written examinations are offered on-line in two subject areas: infection control/sterilization and North Carolina jurisprudence. The only acceptable clinical exams are the ADEX Dental Hygiene or the CDCA/WREB/CITA Dental Hygiene exam. Both written and clinical exams must be passed before a license will be issued. Passing either the written or clinical exam alone does not fulfill requirements for licensure. No candidate may engage in the practice of dental hygiene until the license is issued and properly displayed as required by 21 NCAC 16I .0109, NC Dental Board.

Specific dental hygiene licensure requirements vary among jurisdictions, but all jurisdictions have three basic requirements: an educational requirement, a written examination requirement, and a clinical examination requirement. All jurisdictions accept graduation from a dental hygiene program accredited by the Commission on Dental Accreditation (CODA) as fulfilling the educational requirement. Most jurisdictions also accept graduation from a Canadian dental hygiene program accredited by the Commission on Dental Accreditation of Canada (CDAC).

The NBDHE is intended to fulfill or partially fulfill the written examination requirement, but acceptance of National Board Examination results is completely at the discretion of the individual state. NC does require a passing Dental Hygiene National Board score before a license will be issued. A state can place any limit on acceptance of NBDHE results that it deems appropriate. For example, some states accept National Board Examination results only if earned within the last five to 10 years.

**Academic Standards**

Upon official acceptance, Health Sciences students are required to maintain the necessary GPA requirements for entry. Students cannot enter a Health Sciences program while on academic suspension. Health Sciences students must achieve a grade of "C" or higher in their Health Science courses. Students may withdraw or be withdrawn from a Health Sciences course; however, the student will not be allowed to matriculate through their program of study. Reapplication to the program will be required and readmission will be awarded based on the completion of admissions criteria, the policy for readmission, and space availability. Students requesting readmission must meet with the Education Navigator to review their file.

**Program Specific Academic Standards:** See the Dental Hygiene Student Policies and Procedures Manual and specific Dental Hygiene Program course syllabi.

Dental Hygiene Program and progressive related courses must be taken in succession as they appear in the curriculum guide. Dental Hygiene Program students must meet the standards related to demonstration of emotional and physical health within the framework of dental hygiene practice and must adhere to the other policies set forth in the Dental Hygiene Student Policies and Procedures Manual. Dental hygiene students must not be on suspension status.

**C. RE-ADMISSION OR TRANSFER INTO THE DENTAL HYGIENE PROGRAM**

A student must meet the admissions criteria in effect at the time of request for re-admission or transfer. A student may be required to re-enter a dental hygiene course earlier in the curriculum sequence if the student is lacking major content. All Dental Hygiene Program courses completed more than three years prior to re-admission or transfer must be repeated. Withdrawal or academic failure within the Dental Hygiene Program will require the student to reapply to the program for re-entry. Advanced placement is dependent upon space availability. If multiple students apply for re-admission or transfer for the same semester entry, a competitive admissions protocol will be followed to determine the strongest candidate for the available seat. Students who reenter will do so one semester earlier from the semester in which they were released. The procedure for Advanced Standing is valid for candidates for one calendar year from the date leaving the program. After one calendar year, a candidate who wishes to be enrolled in the program must reapply and follow the protocol for re-admission.

The Dental Hygiene Department Chair will evaluate transferability of all Dental Hygiene Program courses. Transfer courses must be equivalent to courses required at the receiving college in both theory and clinical experiences. The student must provide copies of course syllabi and outlines to the Dental Hygiene

Department Chair for those Dental Hygiene Program courses taken. Students lacking essential content may be required to audit a portion of a course, challenge the content, demonstrate skills, or repeat the course as deemed necessary. The final decision for transfer credit for Dental Hygiene Program courses is determined by the Dental Hygiene Department Chair.

Applicants must submit a letter explaining the circumstances of any previous exit from any health science program. The letter must be sent from the Program Director at the former institution. CCCC's Dental Hygiene Department Chair and Vice-President of Student Services must approve students who were dismissed, expelled, or suspended for any reason. Students who withhold previous exit information may be dismissed from the program. A remediation plan may be required.

# A45340B - Emergency Medical Science AAS Bridge Option

## Overview

**Program Code**
A45340B

**Credential**
Associate in Applied Science

## Degree Maps

Emergency Medical Service Bridge Option
**Total Credits**
7

| Semester | Term | Term Credits |
|---|---|---|
| 1st Semester | Fall | 4 |

**Courses**
- ACA122 - College Transfer Success

**Term Credits** 1

**Courses**
- ENG111 - Writing and Inquiry

**Term Credits** 3

**Courses**
- Natural Science/Mathematics Elective: Students must take a combination of BIO 168 and BIO 169 or a combination of BIO 163 and MAT 110 or MAT 143. (Generic)

**Term Credits** -

**Courses**
- Social/Behavioral Science Elective: PSY 150 or SOC 210 (Generic)

**Term Credits** -

| Semester | Term | Term Credits |
|---|---|---|
| 2nd Semester | Spring | 3 |

**Courses**
- ENG112 - Writing and Research in the Disciplines

**Term Credits** 3

**Courses**
- Biology Elective: BIO 163 or BIO 169 (if the student has taken BIO 168) (Generic)

**Term Credits** -

**Courses**
- Humanities/Fine Arts Elective: HUM 115 or PHI 240 (Generic)

**Term Credits** -

**Courses**
- Natural Sciences/Mathematics Elective: Students must take a combination of BIO 168 and BIO 169 or a combination of BIO 163 and MAT 110 or MAT 143. (Generic)

**Term Credits** -

# A45360 - Health Information Technology AAS

## Overview

**Program Code**
A45360

**Program Description**
The Health Information Technology curriculum provides individuals with the knowledge and skills to process, analyze, abstract, compile, maintain, manage, and report health information.

Students will supervise departmental 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; and design system controls to monitor patient information security.

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, outpatient clinics, physicians' offices, hospice, and mental health facilities.

**Career Pathway Options**
Associate in Applied Science Degree in Health Information Technology, Diploma, Certificate(s)

**Career Community**
Health Sciences

**Program Length**
5 semesters

**Credential**
Associate in Applied Science

## Program Information Sheet

**Program Information**
HIT Handbook

PPE Handbook

## Program Outcomes

## Degree Maps

Health Information Technology, Associate in Applied Science Degree - Fall Start

**Total Credits**
68

| Semester | Term | Term Credits |
|---|---|---|
| 1st Semester | Fall | 18 |

**Courses**
- ACA122 - College Transfer Success

**Term Credits** 1

**Courses**
- BIO163 - Basic Anatomy & Physiology

**Term Credits** 5

**Courses**
- ENG111 - Writing and Inquiry

**Term Credits** 3

**Courses**
- HIT110 - Introduction to Healthcare and HIM Management

**Term Credits** 3

**Courses**
- MED121 - Medical Terminology I

**Term Credits** 3

**Courses**
- MED122 - Medical Terminology II

**Term Credits** 3

| Semester | Term | Term Credits |
|---|---|---|
| 2nd Semester | Spring | 14 |

**Courses**
- HIT226 - Pathophysiology & Pharmacology

**Term Credits** 3

**Courses**
- HIT114 - Health Data Systems and Standards

**Term Credits** 3

**Courses**
- HIT211 - Diagnosis Coding and Reporting

**Term Credits** 3

**Courses**
- HIT215 - Revenue Cycle Management

**Term Credits** 2

**Courses**
- CIS110 - Introduction to Computers

**Term Credits** 3

| Semester | Term | Term Credits |
|---|---|---|
| 3rd Semester | Summer | 8 |

**Courses**
- PSY150 - General Psychology

**Term Credits** 3

**Courses**
- HIT214 - Outpatient Procedure Coding/Reporting

**Term Credits** 2

**Courses**
- ENG112 - Writing and Research in the Disciplines

**Term Credits** 3

| Semester | Term | Term Credits |
|---|---|---|
| 4th Semester | Fall | 15 |

**Courses**
- MAT152 - Statistical Methods I

**Term Credits** 4

**Courses**
- HIT112 - Health Law and Ethics

**Term Credits** 3

**Courses**
- HIT218 - Management Principles in HIT

**Term Credits** 3

**Courses**
- HIT213 - Inpatient Procedure Coding & Reporting

**Term Credits** 2

**Courses**
- HIT220 - Electronic Health Records

**OR**
- HIT221 - Lifecycle of Electronic Health Record

**Term Credits** 2

**Courses**
- HIT124 - Professional Practice Exp II

**Term Credits** 1

| Semester | Term | Term Credits |
|---|---|---|
| 5th Semester | Spring | 13 |

**Courses**
- HIT217 - Quality & Data Analysis

**Term Credits** 3

**Courses**
- HIT225 - Healthcare Informatics

**Term Credits** 3

**Courses**
- HIT280 - Health Information Management Capstone

**Term Credits** 2

**Courses**
- HIT222 - Professional Practice Exp III

**Term Credits** 2

**Courses**
- Humanties Elective (Generic)

**Term Credits** 3

Health Information Technology, Associate in Applied Science Degree - Spring Start

**Total Credits**
70

| Semester | Term | Term Credits |
|---|---|---|
| 1st Semester | Spring | 18 |

**Courses**
- BIO163 - Basic Anatomy & Physiology

**Term Credits** 5

**Courses**
- ENG111 - Writing and Inquiry

**Term Credits** 3

**Courses**
- HIT110 - Introduction to Healthcare and HIM Management

**Term Credits** 3

**Courses**
- MED121 - Medical Terminology I

**Term Credits** 3

**Courses**
- MED122 - Medical Terminology II

**Term Credits** 3

**Courses**
- ACA122 - College Transfer Success

**Term Credits** 1

| Semester | Term | Term Credits |
|---|---|---|
| 2nd Semester | Summer | 9 |

**Courses**
- HIT226 - Pathophysiology & Pharmacology

**Term Credits** 3

**Courses**
- ENG112 - Writing and Research in the Disciplines

**Term Credits** 3

**Courses**
- CIS110 - Introduction to Computers

**Term Credits** 3

| Semester | Term | Term Credits |
|---|---|---|
| 3rd Semester | Fall | 12 |

**Courses**
- HIT211 - Diagnosis Coding and Reporting

**Term Credits** 3

**Courses**
- HIT112 - Health Law and Ethics

**Term Credits** 3

**Courses**
- HIT114 - Health Data Systems and Standards

**Term Credits** 3

**Courses**
- PSY150 - General Psychology

**Term Credits** 3

| Semester | Term | Term Credits |
|---|---|---|
| 4th Semester | Spring | 13 |

**Courses**
- MAT152 - Statistical Methods I

**Term Credits** 4

**Courses**
- HIT215 - Revenue Cycle Management

**Term Credits** 2

**Courses**
- HIT213 - Inpatient Procedure Coding & Reporting

**Term Credits** 2

**Courses**
- HIT225 - Healthcare Informatics

**Term Credits** 3

**Courses**
- HIT221 - Lifecycle of Electronic Health Record

**OR**
- HIT220 - Electronic Health Records

**Term Credits** 2

| Semester | Term | Term Credits |
|---|---|---|
| 5th Semester | Summer | 8 |

**Courses**
- HIT124 - Professional Practice Exp II

**Term Credits** 1

**Courses**
- HIT220 - Electronic Health Records

**OR**
- HIT221 - Lifecycle of Electronic Health Record

**Term Credits** 2

**Courses**
- Humanties Elective (Generic)

**Term Credits** 3

**Courses**
- HIT214 - Outpatient Procedure Coding/Reporting

**Term Credits** 2

| Semester | Term | Term Credits |
|---|---|---|
| 6th Semester | Fall | 10 |

**Courses**
- HIT218 - Management Principles in HIT

**Term Credits** 3

**Courses**
- HIT217 - Quality & Data Analysis

**Term Credits** 3

**Courses**
- HIT280 - Health Information Management Capstone

**Term Credits** 2

**Courses**
- HIT222 - Professional Practice Exp III

**Term Credits** 2

Health Information Technology, Associate in Applied Science Degree - Part-time

**Total Credits**
65 - 66

| Semester | Term | Term Credits |
|---|---|---|
| 1st Semester | Fall | 9 |

**Courses**
- ACA122 - College Transfer Success

**Term Credits** 1

**Courses**
- BIO163 - Basic Anatomy & Physiology

**Term Credits** 5

**Courses**
- MED121 - Medical Terminology I

**Term Credits** 3

| Semester | Term | Term Credits |
|---|---|---|
| 2nd Semester | Spring | 9 |

**Courses**
- HIT110 - Introduction to Healthcare and HIM Management

**Term Credits** 3

**Courses**
- MED122 - Medical Terminology II

**Term Credits** 3

**Courses**
- ENG111 - Writing and Inquiry

**Term Credits** 3

| Semester | Term | Term Credits |
|---|---|---|
| 3rd Semester | Summer | 9 |

**Courses**
- HIT226 - Pathophysiology & Pharmacology

**Term Credits** 3

**Courses**
- CIS110 - Introduction to Computers

**Term Credits** 3

**Courses**
- ENG112 - Writing and Research in the Disciplines

**Term Credits** 3

| Semester | Term | Term Credits |
|---|---|---|
| 4th Semester | Fall | 9 |

**Courses**
- MAT152 - Statistical Methods I

**Term Credits** 4

**Courses**
- HIT211 - Diagnosis Coding and Reporting

**Term Credits** 3

**Courses**
- HIT215 - Revenue Cycle Management

**Term Credits** 2

| Semester | Term | Term Credits |
|---|---|---|
| 5th Semester | Spring | 8 |

**Courses**
- HIT112 - Health Law and Ethics

**Term Credits** 3

**Courses**
- HIT213 - Inpatient Procedure Coding & Reporting

**Term Credits** 2

**Courses**
- HIT114 - Health Data Systems and Standards

**Term Credits** 3

| Semester | Term | Term Credits |
|---|---|---|
| 6th Semester | Summer | 5 - 6 |

**Courses**
- HIT220 - Electronic Health Records
  **OR**
- HIT221 - Lifecycle of Electronic Health Record

**Term Credits** 2 - 3

**Courses**
- PSY150 - General Psychology

**Term Credits** 3

**Courses**
- Humanities Elective (Generic)

**Term Credits** -

| Semester | Term | Term Credits |
|---|---|---|
| 7th Semester | Fall | 9 |

**Courses**
- HIT214 - Outpatient Procedure Coding/Reporting

**Term Credits** 2

**Courses**
- HIT124 - Professional Practice Exp II

**Term Credits** 1

**Courses**
- HIT217 - Quality & Data Analysis

**Term Credits** 3

**Courses**
- HIT218 - Management Principles in HIT

**Term Credits** 3

| Semester | Term | Term Credits |
|---|---|---|
| 8th Semester | Spring | 7 |

**Courses**
- HIT280 - Health Information Management Capstone

**Term Credits** 2

**Courses**
- HIT222 - Professional Practice Exp III

**Term Credits** 2

**Courses**
- HIT225 - Healthcare Informatics

**Term Credits** 3

## Approved AAS Electives

**Approved AAS Electives (C-L-SHC)**
**A. Social/Behavioral Science**

Take 3 credits (one course) from the following: PSY 150, ECO 150, ECO 251, ECO 252, POL 120, or SOC 210.

**B. Communications**

Take 3 credits (one course) from the following: ENG 112, ENG 114, COM 110, COM 120, or COM 231.

**C. Humanities/Fine Arts**

Take 3 credits (one course) from the following: ART 111, ART 114, ART 115, DRA 111, ENG 125, ENG 231, ENG 232, ENG 241, ENG 242, HUM 110, HUM 115, HUM 120, HUM 122, HUM 150, HUM 160, MUS 110, MUS 112, PHI 240, REL 110, REL 211, REL 212

## Admissions Requirements

**Admissions Requirements**
**Admissions Standards:**

Program applicants are accepted in the Fall and Spring semesters once minimum admission criteria are met. Admission criteria for the Health Information Technology program are reviewed annually and are subject to change.

**A. PROGRAM SPECIFIC ENTRANCE STANDARDS:**

**Admissions Process**

The student may apply to the Health Information Technology program once minimum admissions criteria are met. This includes the following:

- Minimum 2.0 GPA

- All transcripts received - high school and past colleges
- Eligible to take ENG and MAT without a co-requisite.

**Placement Test Scores**

Students must be eligible to take their gateway Math and English course in order to be eligible to apply. This can be achieved through a High School Unweighted GPA of 2.6 or higher or by presenting acceptable test scores such as SAT, ACT, Accuplacer, or other acceptable scores

Students must be able to be placed into ENG 111 and MAT 152. Students who have an unweighted high school GPA of 2.6 or higher, have met Multiple Measures for Placement or who have earned appropriate transfer credit in English, Math, or developmental courses with a C, P2 for English, or P2 for Math, or higher may be exempt from placement testing.

**GPA**

Students must be in good academic standing upon applying to health science programs. Good academic standing is defined as having a 2.0 GPA in the most recent semester attempted as well as maintaining a 2.0 cumulative GPA. These GPA requirements must be maintained at the time of entering the program from a secondary or post-secondary institution.

**The Test of English as a Foreign Language (TOEFL)**

TOEFL scores are required for any naturalized or non-US citizens who speak English as their second language. This test provides evidence of adequate proficiency in the English language. All test scores must be less than five years old. The minimum acceptable TOEFL scores are based on the following formats: TOEFL iBT Total Score - **80** or higher

TOEFL Essential Overall Band Score: **8** or higher. The test is offered at multiple testing sites nationally or can be taken online and is at the student's expense.

**B. REQUIREMENTS AFTER ACCEPTANCE:**

**Criminal Background Check/Drug Screening**

A criminal background check and drug screening will be required for all accepted Health Sciences students. Clinical affiliates will review criminal background reports and drug screenings of students and reserve the right to accept or deny any students based on their consideration of these reports. Negative reports and/or failed screenings can preclude a student from attending the clinical portion of their prescribed program and thus, will result in the student's exit from the program. Students are subject to criminal background check and drug screening at any time during a clinical rotation. Clinical agencies reserve the right to require additional background checks and drug screens.

**Medical Forms/Immunizations**

Applicants are required to submit a completed college approved student medical health form to the required document tracking system by the assigned date. The student medical form must include satisfactory health history, physical examination, and immunization report. Failure to submit the required information by the assigned date will result in loss of Health Information Technology admission status and class space will be assigned to another applicant.

**Liability/Malpractice Insurance**

Malpractice insurance is required for health sciences students and is assessed as a student fee.

**Transportation/Additional Class/Course Materials**

Health Sciences students are responsible for their own transportation to off-campus clinical/learning sites. Materials and textbooks will be required and are purchased at student's expense.

**Technical Standards**

Please refer to the Health Information Technology program physical requirements and technical standards.

**Academic Standards**

Upon official acceptance, Health Sciences students are required to maintain the necessary GPA requirements for entry. Students cannot enter a Health Sciences program while on academic suspension. Health Sciences students must achieve a grade of "C" or higher in their Health Science courses. Students may withdraw or be withdrawn from a Health Sciences course. However, the student will not be allowed to matriculate through their program of study if they do not achieve a grade of "C" or better. Students completing readmission must meet with the Education Navigator to review their file.

**Program Specific Academic Standards:**

See additional Program Specific Standards in the Health Information Technology Program Guide and specific Health Information Technology course syllabus.

Health Information Technology students must maintain an overall and semester GPA 2.0 or better, and must earn a grade of "C" or better in all courses required by the Health Information Technology curriculum in order to graduate. Health Information Technology and progressive related courses must be taken in succession as they appear in the curriculum guide curriculum guide. Health Information Technology students must adhere to the other policies set forth in the Health Information Technology Program Guide.

**C. RE-ADMISSION OR TRANSFER INTO THE HEALTH INFORMATION TECHNOLOGY PROGRAM:**

The student must qualify under the admission criteria in effect at time of readmission or transfer. A student may be required to re-enter a Health Information Technology course earlier in the curriculum sequence if the student is lacking major content as evaluated by the Program Director. All Health Information Technology courses completed more than three years prior to re-admission or transfer must either be challenged by exam, including passing an assessment of all skills and/or competencies covered in that course, or the course must be repeated. Withdrawal or academic failure within the Health Information Technology program will require the student to reapply as a new student. Advanced placement is dependent upon space availability.

The Health Information Technology Program Director will evaluate transferability of all Health Information Technology courses. Transfer courses must be equivalent to courses required at the receiving college in both theory and clinical experiences. The student must provide copies of course syllabi and outlines for those Health Information Technology courses taken to the Program Director. Students lacking essential content may be required to audit a portion of a course, challenge the content, demonstrate skills or repeat the course as deemed necessary. The final decision for transfer credit for Health Information Technology courses is determined by the Health Information Technology Program Director.

Applicants must submit a letter explaining the circumstances of any previous exit from any health sciences program. The letter must be sent from the previous Program Director. CCCC's Health Information Technology Program Director and Vice President of Student Services must approve students who were dismissed, expelled, or suspended for any reason. Students who withhold previous exit information may be dismissed from the program. A remediation plan may be required.

# A45380 - Social and Human Services AAS

## Overview

**Program Code**
A45380

**Program Description**
The Social and Human Services curriculum prepares students for entry-level positions in institutions and agencies which provide social, community, and behavioral health services. Along with core courses, students take courses which prepare them for specialization in specific human service areas.

Coursework includes the development of professional knowledge, skills, and values in human services. Opportunities for experiential learning allow students to apply knowledge and skills learned in the classroom.

Graduates should qualify for positions in government, private, and nonprofit social and human services agencies. Graduates may choose to transfer and continue their education at a variety of colleges and universities.

**Career Pathway Options**
Associate in Applied Science Degree in Social and Human Services

**Career Community**
Health Sciences

**Program Length**
5 semesters

**Credential**
Associate in Applied Science

## Program Outcomes

## Degree Maps

Social and Human Services, Associate in Applied Science Degree - Fall Start
**Total Credits**
65

| Semester | Term | Term Credits |
|---|---|---|
| 1st Semester | Fall | 17 |

**Courses**
- ACA122 - College Transfer Success

**Term Credits** 1

**Courses**
- HSE135 - Orientation Lab I

**Term Credits** 1

**Courses**
- DDT110 - Intellectual & Developmental Disabilities

**Term Credits** 3

**Courses**
- GRO120 - Intro to Gerontology

**Term Credits** 3

**Courses**
- HSE110 - Introduction to Human Services

**Term Credits** 3

**Courses**
- MHA140 - Introduction to Mental Health

**Term Credits** 3

**Courses**
- SAB110 - Intro to Addiction & Recovery Studies

**Term Credits** 3

| Semester | Term | Term Credits |
|---|---|---|
| 2nd Semester | Spring | 15 |

**Courses**
- ENG111 - Writing and Inquiry

**Term Credits** 3

**Courses**
- HSE223 - Counseling Theories & Skills

**Term Credits** 3

**Courses**
- MHA238 - Psychopathology

**Term Credits** 3

**Courses**
- PSY150 - General Psychology

**Term Credits** 3

**Courses**
- SWK113 - Cultural Competency & Diversity

**Term Credits** 3

| Semester | Term | Term Credits |
|---|---|---|
| 3rd Semester | Summer | 6 |

**Courses**
- COM110 - Introduction to Communication

**Term Credits** 3

**Courses**
- SOC210 - Introduction to Sociology

**Term Credits** 3

**Courses**
- Student may exit with a Diploma in Social and Human Services (Generic)

**Term Credits** -

| Semester | Term | Term Credits |
|---|---|---|
| 4th Semester | Fall | 13 |

**Courses**
- BIO110 - Principles of Biology

**Term Credits** 4

**Courses**
- HSE220 - Case Management

**Term Credits** 3

**Courses**
- HSE225 - Crisis and Intervention Principles

**Term Credits** 3

**Courses**
- PSY241 - Developmental Psychology

**Term Credits** 3

| Semester | Term | Term Credits |
|---|---|---|
| 5th Semester | Spring | 14 |

**Courses**
- HSE123 - Interviewing Techniques for Human Services

**Term Credits** 3

**Courses**
- HSE210 - Diversity, Ethics, and Trends in Human Services

**Term Credits** 3

**Courses**
- HSE212 - Group Dynamics

**Term Credits** 3

**Courses**
- PHI240 - Introduction to Ethics

**Term Credits** 3

**Courses**
- WBL110 - World of Work

**Term Credits** 1

**Courses**
- WBL110A - World of Work Lab

**Term Credits** 1

Social and Human Services, Associate in Applied Science Degree - Spring Start
**Total Credits**
65

| Semester | Term | Term Credits |
|---|---|---|
| 1st Semester | Spring | 14 |

**Courses**
- ACA122 - College Transfer Success

**Term Credits** 1

**Courses**
- HSE135 - Orientation Lab I

**Term Credits** 1

**Courses**
- HSE110 - Introduction to Human Services

**Term Credits** 3

**Courses**
- MHA140 - Introduction to Mental Health

**Term Credits** 3

**Courses**
- PSY150 - General Psychology

**Term Credits** 3

**Courses**
- SAB110 - Intro to Addiction & Recovery Studies

**Term Credits** 3

| Semester | Term | Term Credits |
|---|---|---|
| 2nd Semester | Fall | 18 |

**Courses**
- DDT110 - Intellectual & Developmental Disabilities

**Term Credits** 3

**Courses**
- ENG111 - Writing and Inquiry

**Term Credits** 3

**Courses**
- GRO120 - Intro to Gerontology

**Term Credits** 3

**Courses**
- HSE223 - Counseling Theories & Skills

**Term Credits** 3

**Courses**
- MHA238 - Psychopathology

**Term Credits** 3

**Courses**
- SWK113 - Cultural Competency & Diversity

**Term Credits** 3

| Semester | Term | Term Credits |
|---|---|---|
| 3rd Semester | Summer | 6 |

**Courses**
- COM110 - Introduction to Communication

**Term Credits** 3

**Courses**
- SOC210 - Introduction to Sociology

**Term Credits** 3

| Semester | Term | Term Credits |
|---|---|---|
| 4th Semester | Spring | 13 |

**Courses**
- BIO110 - Principles of Biology

**Term Credits** 4

**Courses**
- HSE220 - Case Management

**Term Credits** 3

**Courses**
- HSE225 - Crisis and Intervention Principles

**Term Credits** 3

**Courses**
- PSY241 - Developmental Psychology

**Term Credits** 3

| Semester | Term | Term Credits |
|---|---|---|
| 5th Semester | Fall | 14 |

**Courses**
- HSE123 - Interviewing Techniques for Human Services

**Term Credits** 3

**Courses**
- HSE210 - Diversity, Ethics, and Trends in Human Services

**Term Credits** 3

**Courses**
- HSE212 - Group Dynamics

**Term Credits** 3

**Courses**
- PHI240 - Introduction to Ethics

**Term Credits** 3

**Courses**
- WBL110 - World of Work

**Term Credits** 1

**Courses**
- WBL110A - World of Work Lab

**Term Credits** 1

## Approved AAS Electives

**Approved AAS Electives (C-L-SHC)**

| APPROVED HUMANITIES/FINE ARTS ELECTIVES | APPROVED SOCIAL/BEHAVIORAL SCIENCE ELECTIVES |
|---|---|
| ART 111 Art Appreciation 3-0-3 | ANT 210 General Anthropology 3-0-3 |
| ART 114 Art History Survey I 3-0-3 | ANT 220 Cultural Anthropology 3-0-3 |
| ART 115 Art History Survey II 3-0-3 | ECO 151 Survey of Economics 3-0-3 |
| DRA 111 Theatre Appreciation 3-0-3 | ECO 251 Principles of Microeconomics 3-0-3 |
| ENG 125 Creative Writing I 3-0-3 | ECO 252 Principles of Macroeconomics 3-0-3 |
| ENG 231 American Literature I 3-0-3 | HIS 111 World Civilization I 3-0-3 |
| ENG 232 American Literature II 3-0-3 | HIS 112 World Civilization II 3-0-3 |
| *ENG 241 British Literature I 3-0-3 | HIS 131 American History I 3-0-3 |
| *ENG 242 British Literature II 3-0-3 | HIS 132 American History II 3-0-3 |
| HUM 110 Technology and Society 3-0-3 | HIS 222 African-American History I 3-0-3 |
| HUM 115 Critical Thinking 3-0-3 | HIS 223 African-American History II 3-0-3 |
| HUM 120 Cultural Studies 3-0-3 | HIS 226 The Civil War 3-0-3 |
| HUM 122 Southern Culture 3-0-3 | HIS 236 North Carolina History 3-0-3 |
| HUM 150 American Women's Studies 3-0-3 | POL 120 American Government 3-0-3 |
| HUM 160 Introduction to Film 2-2-3 | PSY 150 General Psychology 3-0-3 |
| MUS 110 Music Appreciation 3-0-3 | PSY 237 Social Psychology 3-0-3 |
| MUS 112 Introduction to Jazz 3-0-3 | PSY 241 Developmental Psychology 3-0-3 |
| PHI 240 Introduction to Ethics 3-0-3 | PSY 246 Adolescent Psychology 3-0-3 |
| REL 110 World Religions 3-0-3 | PSY 281 Abnormal Psychology 3-0-3 |
| REL 211 Intro to Old Testament 3-0-3 | SOC 210 Introduction to Sociology 3-0-3 |
| REL 212 Intro to New Testament 3-0-3 | SOC 213 Sociology of the Family 3-0-3 |
| | SOC 220 Social Problems 3-0-3 |
| | SOC 225 Social Diversity 3-0-3 |
| | SOC 232 Social Context of Aging 3-0-3 |
| *Not applicable for some health sciences programs.* | SOC 240 Social Psychology 3-0-3 |

# A45400 - Medical Assisting AAS

## Overview

**Program Code**
A45400

**Program Description**
The Medical Assisting curriculum prepares multi-skilled health care professionals qualified to perform administrative, clinical, and laboratory procedures.

Course work includes instruction in scheduling appointments, coding and processing insurance accounts, billing, collections, computer operations; assisting with examinations/treatments, performing routine laboratory procedures, electrocardiography, supervised medication administration; and ethical/legal

issues associated with patient care.

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.

**Career Pathway Options**
Associate in Applied Science in Medical Assisting; Diploma in Medical Assisting

**Career Community**
Health Sciences

**Program Length**
5 semesters

**Credential**
Associate in Applied Science

## Program Outcomes

## Degree Maps

Medical Assisting, Associate in Applied Science Degree
**Total Credits**
69

| Semester | Term | Term Credits |
|---|---|---|
| 1st Semester | Fall | 17 |

**Courses**
- ACA122 - College Transfer Success

**Term Credits** 1

**Courses**
- BIO163 - Basic Anatomy & Physiology

**Term Credits** 5

**Courses**
- MED110 - Orientation to Medical Assisting

**Term Credits** 1

**Courses**
- MED121 - Medical Terminology I

**Term Credits** 3

**Courses**
- MED130 - Administrative Office Procedures I

**Term Credits** 2

**Courses**
- MED140 - Examining Room Procedures I

**Term Credits** 5

| Semester | Term | Term Credits |
|---|---|---|
| 2nd Semester | Spring | 18 |

**Courses**
- ENG111 - Writing and Inquiry

**Term Credits** 3

**Courses**
- MED118 - Medical Law and Ethics

**Term Credits** 2

**Courses**
- MED122 - Medical Terminology II

**Term Credits** 3

**Courses**
- MED150 - Laboratory Procedures I

**Term Credits** 5

**Courses**
- MED240 - Examining Room Procedures II

**Term Credits** 5

| Semester | Term | Term Credits |
|---|---|---|
| 3rd Semester | Summer | 10 |

**Courses**
- PSY150 - General Psychology

**Term Credits** 3

**Courses**
- MED260 - MED Clinical Practicum

**Term Credits** 5

**Courses**
- MED264 - Medical Assisting Overview

**Term Credits** 2

**Courses**
- Students may exit w/Diploma (Generic)

**Term Credits** -

| Semester | Term | Term Credits |
|---|---|---|
| 4th Semester | Fall | 13 |

**Courses**
- MAT110 - Mathematical Measurement and Literacy

**Term Credits** 3

**Courses**
- MED131 - Administrative Office Procedures II

**Term Credits** 2

**Courses**
- MED270 - Symptomatology

**Term Credits** 3

**Courses**
- MED276 - Patient Education

**Term Credits** 2

**Courses**
- Communication, select one (Generic)

**Term Credits** 3

| Semester | Term | Term Credits |
|---|---|---|
| 5th Semester | Spring | 11 |

**Courses**
- MED232 - Medical Insurance Coding

**Term Credits** 2

**Courses**
- MED272 - Drug Therapy

**Term Credits** 3

**Courses**
- MED274 - Diet Therapy/Nutrition

**Term Credits** 3

**Courses**
- Humanities/Fine Arts Electives (Generic)

**Term Credits** 3

## Approved AAS Electives

**Approved AAS Electives (C-L-SHC)**

| APPROVED HUMANITIES/FINE ARTS ELECTIVES |
|---|
| ART 111 Art Appreciation 3-0-3 |
| ART 114 Art History Survey I 3-0-3 |
| ART 115 Art History Survey II 3-0-3 |
| DRA 111 Theatre Appreciation 3-0-3 |
| ENG 125 Creative Writing I 3-0-3 |
| ENG 231 American Literature I 3-0-3 |
| ENG 232 American Literature II 3-0-3 |
| *ENG 241 British Literature I 3-0-3 |
| *ENG 242 British Literature II 3-0-3 |
| HUM 110 Technology and Society 3-0-3 |
| HUM 115 Critical Thinking 3-0-3 |
| HUM 120 Cultural Studies 3-0-3 |
| HUM 122 Southern Culture 3-0-3 |
| HUM 150 American Women's Studies 3-0-3 |
| HUM 160 Introduction to Film 2-2-3 |
| MUS 110 Music Appreciation 3-0-3 |
| MUS 112 Introduction to Jazz 3-0-3 |
| PHI 240 Introduction to Ethics 3-0-3 |
| REL 110 World Religions 3-0-3 |
| REL 211 Intro to Old Testament 3-0-3 |
| REL 212 Intro to New Testament 3-0-3 |
| **Not applicable for some health sciences programs.* |

## Admissions Requirements

**Admissions Requirements**

**A. PROGRAM SPECIFIC ENTRANCE STANDARDS:**

**Admissions Process**

The student may apply to the Medical Assisting program once minimum admissions criteria are met. This includes the following:

- Minimum 2.0 GPA
- All transcripts received - high school and past colleges
- Eligible to take ENG and MAT without a co-requisite.

**Placement Test Scores**

Students must be eligible to take their gateway Math and English course in order to be eligible to apply. This can be achieved through a High School Unweighted GPA of 2.6 or higher or by presenting acceptable test scores such as SAT, ACT, Accuplacer, or other acceptable scores

The Medical Assisting program indicates the minimum scores required to place into ENG 111 and MAT 110. Students who have an unweighted high school GPA of 2.6 or higher, have met Multiple Measures for Placement or who have earned appropriate transfer credit in English, Math, or developmental courses with a C, P2 for English, or P1 for Math, or higher may be exempt from placement testing.

**GPA**

Students must be in good academic standing upon applying to health science programs. Good academic standing is defined as having a 2.0 GPA in the most recent semester attempted as well as maintaining a 2.0 cumulative GPA.

**The Test of English as a Foreign Language (TOEFL)**

TOEFL scores are required for any naturalized or non-US citizens who speak English as their second language. This test provides evidence of adequate proficiency in the English language. All test scores must be less than five years old. The minimum acceptable TOEFL scores are based on the following formats: TOEFL iBT Total Score - **80** or higher

TOEFL Essential Overall Band Score: **8** or higher. The test is offered at multiple testing sites nationally or can be taken online and is at the student's expense.

**B. REQUIREMENTS AFTER ACCEPTANCE:**

**Criminal Background Check/Drug Screening**

A criminal background check and drug screening will be required for all accepted Health Sciences Clinical affiliates will review criminal background reports and drug screenings of students and reserve the right to accept or deny any students based on their consideration of these reports. Negative reports and/or failed screenings can preclude a student from attending the clinical portion of their prescribed program and thus, will result in the student's exit from the program. Students are subject to criminal background check and drug screening at any time during a clinical rotation. Clinical agencies reserve the right to require additional background checks and drug screens.

**Medical Forms/Immunizations**

Applicants are required to submit a completed college approved student medical health form to the required document tracking system by the assigned date. The student medical form must include satisfactory health history, physical examination, and immunization report. Failure to submit the required information by the assigned date will result in loss of Medical Assisting admission status and class space will be assigned to another applicant.

**BLS Provider CPR**

CPR Certification by the American Heart Association (AHA) in BLS Provider (Basic Life Support including CPR and AED) that includes both performance and testing of criteria is required prior to clinical rotations. Students are responsible for keeping their CPR certification current throughout the duration of the program.

**Mandatory Orientation Session**

Accepted students must attend a mandatory orientation session with the Medical Assisting Program.

**Liability/Malpractice Insurance**

Malpractice insurance is required for health sciences students and is assessed as a student fee.

**Transportation/Additional Class/Course Materials**

Health Sciences students are responsible for their own transportation to off-campus clinical/learning sites. Materials other than textbooks will be required and are purchased at student's expense.

**Technical Standards**

The Health Sciences programs are physically demanding. Students will be expected to perform lifting, pushing, pulling, and carrying tasks to successfully practice in a lab setting, complete clinical affiliations, and safely treat patients. For more details, please refer to each program of study's physical requirements and technical standards.

**Academic Standards**

Upon official acceptance, Health Sciences students are required to maintain the necessary GPA requirements for entry. Students cannot enter a Health Sciences program while on academic suspension. Health Sciences students must achieve a grade of "C" or higher in their Health Science courses. Students may withdraw or be withdrawn from a Health Sciences course. However, the student will not be allowed to matriculate through their program of study. Readmission to the program will be required and readmission will be awarded based on admissions criteria completion, policy on readmission, and space availability. Students completing readmission must meet with the Education Navigator counselor to review their file.

**Program Specific Academic Standards:**

See additional Program Specific Standards in the Medical Assisting Student Handbook and specific Medical Assisting course syllabus.

Medical Assisting and progressive related courses must be taken in succession as they appear in the curriculum guide. Medical Assisting students must adhere to the other policies set forth in the Medical Assisting Student Handbook.

**C. RE-ADMISSION OR TRANSFER INTO THE MEDICAL ASSISTING PROGRAM:**

The student must qualify under the admission criteria in effect at time of readmission or transfer. A student may be required to re-enter a Medical Assisting course earlier in the curriculum sequence if the student is lacking major content as evaluated by the Program Director. All Medical Assisting courses completed more than three years prior to re-admission or transfer must either be challenged by exam, including passing an assessment of all skills and/or competencies covered in that course, or the course must be repeated. Withdrawal or academic failure within the Medical Assisting program will require the student to reapply as a new student. Advanced placement is dependent upon space availability.

The Medical Assisting Program Director will evaluate transferability of all Medical Assisting courses. Transfer courses must be equivalent to courses required at the receiving college in both theory and clinical experiences. The student must provide copies of course syllabi and outlines for those Medical Assisting courses taken to the Program Director. Students lacking essential content may be required to audit a portion of a course, challenge the content, demonstrate skills or repeat the course as deemed necessary. The final decision for transfer credit for Medical Assisting courses is determined by the Medical Assisting Program Director.

Applicants must submit a letter explaining the circumstances of any previous exit from any health sciences program. The letter must be sent from the previous Program Director. CCCC's Medical Assisting Program Director and Vice President of Student Services must approve students who were dismissed, expelled, or suspended for any reason. Students who withhold previous exit information may be dismissed from the program. A remediation plan may be required.

# A45440 - Medical Sonography AAS

## Overview

**Program Code**
A45440

**Program Description**
The Medical Sonography curriculum provides knowledge and clinical skills in the application of high frequency sound waves to image internal body structures.

Course work includes physics, cross-sectional anatomy, abdominal, introductory vascular, and obstetrical/gynecological sonography. Competencies are attained in identification of normal anatomy and pathological processes, use of equipment, fetal growth and development, integration of related imaging, and patient interaction skills.

Graduates of accredited programs may be eligible to take examinations in ultrasound physics and instrumentation and specialty examinations administered by the American Registry of Diagnostic Medical Sonographers and find employment in clinics, physicians? offices, mobile services, hospitals, and educational institutions.

**Career Pathway Options**
Associate in Applied Science Degree

**Career Community**
Health Sciences

**Program Length**
5 semesters

**Credential**
Associate in Applied Science

## Program Outcomes

## Degree Maps

Medical Sonography AAS
**Total Credits**
74 - 75

| Semester | Term | Term Credits |
|---|---|---|
| 1st Semester | Fall | 14 |

**Courses**
- ACA122 - College Transfer Success

**Term Credits** 1

**Courses**
- PSY150 - General Psychology
  **OR**
- SOC210 - Introduction to Sociology

**Term Credits** 3

**Courses**
- SON110 - Introduction to Sonography

**Term Credits** 3

**Courses**
- SON111 - Sonographic Physics

**Term Credits** 4

**Courses**
- SON130 - Abdominal Sonography I

**Term Credits** 3

| Semester | Term | Term Credits |
|---|---|---|
| 2nd Semester | Spring | 16 |

**Courses**
- BIO163 - Basic Anatomy & Physiology

**Term Credits** 5

**Courses**
- SON120 - Sonography Clinical Education I

**Term Credits** 5

**Courses**
- SON131 - Abdominal Sonography II

**Term Credits** 2

**Courses**
- SON140 - Gynecological Sonography

**Term Credits** 2

**Courses**
- SON241 - Obstetrical Sonography I

**Term Credits** 2

| Semester | Term | Term Credits |
|---|---|---|
| 3rd Semester | Summer | 9 |

**Courses**
- SON121 - Sonography Clinical Education II

**Term Credits** 5

**Courses**
- PHY110 - Conceptual Physics

**Term Credits** 3

**Courses**
- PHY110A (Generic)

**Term Credits** 1

| Semester | Term | Term Credits |
|---|---|---|
| 4th Semester | Fall | 18 |

**Courses**
- Elective - Communications (Generic)

**Term Credits** 3

**Courses**
- ENG111 - Writing and Inquiry

**Term Credits** 3

**Courses**
- SON220 - Sonography Clinical Education III

**Term Credits** 8

**Courses**
- SON242 - Obstetrical Sonography II

**Term Credits** 2

**Courses**
- SON250 - Vascular Sonography

**Term Credits** 2

| Semester | Term | Term Credits |
|---|---|---|
| 5th Semester | Spring | 17 - 18 |

**Courses**

- MAT143 - Quantitative Literacy
  **OR**
- MAT152 - Statistical Methods I
  **OR**
- MAT171 - Precalculus Algebra

**Term Credits** 3 - 4

**Courses**

- PHI240 - Introduction to Ethics

**Term Credits** 3

**Courses**

- SON221 - Sonography Clinical Education IV

**Term Credits** 8

**Courses**

- SON225 - Case Studies

**Term Credits** 1

**Courses**

- SON289 - Sonographic Topics

**Term Credits** 2

## Limited Enrollment Program Information

**Limited Enrollment Curriculum:**

The Medical Sonography program is a limited enrollment curriculum and program applicants are accepted based upon a selective admissions process. Admission criteria for the Medical Sonography program are reviewed annually and are subject to change.

**A. PROGRAM SPECIFIC ENTRANCE STANDARDS:**

**Admission**

A student may apply to the Medical Sonography Program once minimum admissions criteria are met.

Prospective applicants are required to complete the Health Sciences information session as well as contact their Education Navigator prior to developing a plan for completing minimum requirements . The Education Navigator will review each applicant's progress and provide further guidance once all minimum admission requirements are met.

Once an applicant has completed all general admissions criteria and all Medical Sonography Program entrance requirements, they must submit a completed Limited Enrollment Application. Applicants who meet all requirements will be ranked according to the order in which they applied.

During the initial consideration, applicants will have an opportunity to indicate first and second choice programs when completing the Limited Enrollment Application. If seats do not fill after the initial consideration and after second choice candidates are considered, applicants will be admitted on a first qualified, first accepted basis up until the date of the required mandatory health science orientation.

Applicants must also submit a completed "Statement of Good Standing Form" explaining the circumstances of any previous exit from any health science program. The letter must be sent from the program director at the time of the student's previous enrollment. CCCC's Medical Sonography Department Chair and Vice President of Student Services must approve students who were dismissed, expelled, or suspended for any reason. Students who withhold previous exit information may be dismissed from the program.

Applicants who do not gain entry but want to gain entry in a future year do not need to resubmit their application. Applicants will remain on the active applicant list as long as they are interested in being considered for the program.

It is the applicant's responsibility to ensure that requirements are met by the established deadline.

More information can be found on the Limited Enrollment Website.

**Placement Test Scores**

Students must be eligible to take their gateway Math and English course in order to be eligible to apply. This can be achieved through a High School Unweighted GPA of 2.6 or higher or by presenting acceptable test scores such as SAT, ACT, Accuplacer,, or other acceptable scores.

The checklist for the Medical Sonography program indicates the minimum scores required to place into ENG 111 and at minimum MAT 143. Students who have an unweighted high school GPA of 2.6 or higher, have met Multiple Measures for Placement or who have earned appropriate transfer credit in English, Math, or developmental courses with a C, P2 for English, or P2 for MAT-143 or MAT-152 and P3 or MAT-171, or higher may be exempt from placement testing.

**GPA**

Students are required to have a 3.0 GPA or higher based on the general education courses for the program in order to apply through the limited enrollment process. Students can apply if they have a 2.8-3.0 GPA but will be placed on an alternate list. Alternates will be considered if there are not enough applicants to fill all seats. These GPA requirements must be maintained at the time of entering the program from a secondary or post-secondary institution.

**General Education Courses**

The following courses are required to be completed with a grade of "B" or better prior to applying: PHY-110/110A, BIO-163 . The following courses are required to be completed with a grade of "C" or better prior to applying: ENG-111, PSY-150 or SOC-210, PHI-240, Communications Elective, Math Elective, & ACA-122.

**The Test of English as a Foreign Language (TOEFL)**

TOEFL scores are required for any naturalized or non-US citizens who speak English as their second language. This test provides evidence of adequate proficiency in the English language. All test scores must be less than five years old. The minimum acceptable TOEFL scores are based on the following formats: TOEFL iBT Total Score - **80** or higher

TOEFL Essential Overall Band Score: **8** or higher. The test is offered at multiple testing sites nationally or can be taken online and is at the student's expense.

**B. REQUIREMENTS AFTER ACCEPTANCE:**

**Criminal Background Check/Drug Screening**

A criminal background check and drug screening will be required for all accepted Health Sciences students. Clinical affiliates will review criminal background reports and drug screenings of students and reserve the right to accept or deny any students based on their consideration of these reports. Negative reports and/or failed screenings can preclude a student from attending the clinical portion of their prescribed program and thus, will result in the student's exit from the program. Students are subject to criminal background check and drug screening at any time during a course with a clinical rotation. Clinical agencies reserve the right to require additional background checks and drug screens. Associated fees are the student's responsibility.

**Medical Forms/Immunizations**

Applicants are required to submit a completed college approved student medical health form to the required document tracking system by the assigned date. The student medical form must include satisfactory health history, physical

examination, and immunization report. Failure to submit the required information by the assigned date will result in loss of Medical Sonography admission status and class space will be assigned to another applicant.

**BLS Provider CPR**

CPR Certification by the American Heart Association (AHA) in BLS Provider (Basic Life Support including CPR and AED) that includes both performance and testing of criteria is required prior to clinical rotations. Students are responsible for keeping their CPR certification current throughout the duration of the program.

**Mandatory Orientation Session**

When notified of acceptance, applicants must attend a mandatory orientation session with the sonography department.

**Liability/Malpractice Insurance**

Malpractice insurance is required for health sciences students and is assessed as a student fee.

**Transportation/Additional Class/Course Materials**

Health Sciences students are responsible for their own transportation to off-campus clinical/learning sites. Materials other than textbooks will be required and are purchased at student's expense. Students may be required to attend classes on alternate dates depending on availability of resources to meet the objectives of the course. Students will be notified in advance at the earliest possible time.

**Technical Standards**

The Health Sciences programs are physically demanding. Students will be expected to perform lifting, pushing, pulling, and carrying tasks to successfully practice in a lab and clinical setting. For more details, please refer to each program of study's physical requirements and technical standards.

**Academic Standards**

Upon official acceptance, Health Sciences students are required to maintain the necessary GPA requirements for entry. Students cannot enter a Health Sciences program while on academic suspension. Health Sciences students must achieve a grade of "C" or higher in all Health Science courses.

Students may withdraw or be withdrawn from a Health Sciences course. However, the student will not be allowed to matriculate through their program of study. Reapplication to the program will be required and readmission will be awarded based on admissions criteria completion, policy on readmission, and space availability. Students completing readmission must meet with the Education Navigator to review their file.

**Program Specific Academic Standards**

See additional program specific standards in the Medical Sonography Program Manual and specific Medical Sonography course syllabus.

Medical Sonography and progressive related courses must be taken in succession as they appear in the curriculum guide. Medical Sonography students must adhere to the other policies set forth in the Medical Sonography Program Manual.

**C. RE-ADMISSION, TRANSFER, OR ADVANCED STANDING INTO THE MEDICAL SONOGRAPHY PROGRAM**

The student must qualify under the admission criteria in effect at time of readmission or transfer. A student may be required to re-enter a Medical Sonography course earlier in the curriculum sequence if the student is lacking major content. All Medical Sonography courses completed more than three years prior to re-admission or transfer must either be challenged by exam, including passing an assessment of all skills and/or competencies covered in that course, or the course must be repeated. Withdrawal or academic failure within the Medical Sonography Program will require the student to reapply. Advanced placement is dependent upon space availability. The Sonography Program Director will evaluate transferability of all Medical Sonography courses. Transfer courses must be equivalent to courses required at the receiving college in both class, lab, and clinical experiences. The student must provide copies of course syllabi and outlines for those Medical Sonography courses to the program director. Students lacking essential content may be required to audit a portion of a course, challenge the content, demonstrate skills, or repeat the course as deemed necessary. The final decision for transfer credit for Medical Sonography courses is determined by the Sonography Program Director.

Applicants must submit a letter explaining the circumstances of any previous exit from any health science program. The letter must be sent from the previous Program Director. CCCC's Sonography Program Director and Vice President of Student Services must approve students who were dismissed, expelled, or suspended for any reason. Students who withhold previous exit information may be dismissed from the program. A remediation plan may be required.

# A45620 - Physical Therapist Assistant AAS

## Overview

**Program Code**
A45620

**Program Description**
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 the life span.

Graduates may be eligible to take the licensure examination administered by the NC Board of Physical Therapy Examiners. Employment is available in general hospitals, rehabilitation centers, extended care facilities, specialty hospitals, home health agencies, private clinics, and public school systems.

**Career Pathway Options**
Associate in Applied Science in Physical Therapist Assistant

**Career Community**
Health Sciences

**Program Length**
5 semesters

**Credential**
Associate in Applied Science

## Program Outcomes

## Degree Maps

Physical Therapist Assistant, Associate in Applied Science
**Total Credits**
73

| Semester | Term | Term Credits |
|---|---|---|
| 1st Semester | Fall | 17 |

**Courses**
- ACA122 - College Transfer Success

**Term Credits** 1

**Courses**
- BIO168 - Anatomy and Physiology I

**Term Credits** 4

**Courses**
- ENG111 - Writing and Inquiry

**Term Credits** 3

**Courses**
- PTA110 - Introduction to Physical Therapy

**Term Credits** 3

**Courses**
- PTA130 - Physical Therapy Procedures I

**Term Credits** 3

**Courses**
- PTA170 - Pathophysiology

**Term Credits** 3

| Semester | Term | Term Credits |
|---|---|---|
| 2nd Semester | Spring | 18 |

**Courses**
- BIO169 - Anatomy and Physiology II

**Term Credits** 4

**Courses**
- PHY110 - Conceptual Physics

**Term Credits** 3

**Courses**
- PHY110A - Conceptual Physics Lab

**Term Credits** 1

**Courses**
- PTA120 - Functional Anatomy

**Term Credits** 3

**Courses**
- PTA140 - Therapeutic Exercise

**Term Credits** 4

**Courses**
- PTA150 - Physical Therapy Procedures II

**Term Credits** 3

| Semester | Term | Term Credits |
|---|---|---|
| 3rd Semester | Summer | 10 |

**Courses**
- PSY150 - General Psychology

**Term Credits** 3

**Courses**
- PTA160 - Physical Therapy Procedures III

**Term Credits** 3

**Courses**
- PTA212 - Health Care/Resources

**Term Credits** 2

**Courses**
- PTA222 - Professional Interactions

**Term Credits** 2

| Semester | Term | Term Credits |
|---|---|---|
| 4th Semester | Fall | 15 |

**Courses**
- Communications Elective (Generic)

**Term Credits** 3

**Courses**
- PTA240 - Physical Therapy Procedures IV

**Term Credits** 5

**Courses**
- PTA252 - Geriatrics for the PTA

**Term Credits** 2

**Courses**
- PTA254 - Pediatrics for the PTA

**Term Credits** 1

**Courses**
- PTA180 - PTA Clinical Ed Intro

**Term Credits** 3

**Courses**
- PTA270 - PTA Topics

**Term Credits** 1

| Semester | Term | Term Credits |
|---|---|---|
| 5th Semester | Spring | 13 |

**Courses**
- Humanities/Fine Arts Elective (Generic)

**Term Credits** 3

**Courses**
- PTA260AB (Generic)

**Term Credits** 5

**Courses**
- PTA260BB (Generic)

**Term Credits** 5

## Approved AAS Electives

**Approved AAS Electives (C-L-SHC)**

| APPROVED HUMANITIES/FINE ARTS ELECTIVES | APPROVED COMMUNICATION ELECTIVES |
|---|---|
| Humanities/Fine Arts Elective, select one:<br>ART 111 Art Appreciation 3-0-3<br>ART 114 Art History Survey I 3-0-3<br>ART 115 Art History Survey II 3-0-3<br>ENG 231 American Literature I 3-0-3<br>ENG 232 American Literature II 3-0-3<br>*ENG 241 British Literature I 3-0-3<br>*ENG 242 British Literature II 3-0-3<br>MUS 110 Music Appreciation 3-0-3<br>MUS 112 Introduction to Jazz 3-0-3<br>PHI 240 Introduction to Ethics 3-0-3<br><br>*Not applicable for some health sciences programs.* | Communications, select one:<br>COM 110 Introduction to Communication 3-0-0-3<br>COM 120 Intro Interpersonal Communication 3-0-0-3<br>COM 231 Public Speaking 3-0-0-3<br>ENG 112 Writing/Research in the Disc 3-0-0-3<br>ENG 114 Prof Research & Reporting 3-0-0-3 |

## Limited Enrollment Program Information

**Limited Enrollment Curriculum:**
The Physical Therapist Assistant program is a limited enrollment curriculum and program applicants are accepted based upon admissions requirements. Admission criteria for the Physical Therapist Assistant program are reviewed annually and are subject to change. Enrollment is limited to the number of approved spaces allocated by the Commission on Accreditation in Physical Therapy Education.

**A. PROGRAM SPECIFIC ENTRANCE STANDARDS:**

**Admission**

A student may apply to the Physical Therapist Assistant Program once minimum admissions criteria are met.

Prospective applicants are required to complete the Health Sciences information session as well as contact their Education Navigator prior to developing a plan for completing minimum requirements. The Education Navigator will review each applicant's progress and provide further guidance once all minimum admission requirements are met.

Once an applicant has completed all general admissions criteria and all Physical Therapist Assistant Program entrance requirements, they must submit a completed Limited Enrollment Application. Applicants who meet all requirements will be ranked based on GPA and admitted in order of ranking.

During the initial consideration, applicants will have an opportunity to indicate first and second choice programs when completing the Limited Enrollment Application. If seats do not fill after the initial consideration and after second-choice candidates are considered, applicants will be admitted on a first-qualified, first-accepted basis up until the date of the required mandatory health science orientation.

Applicants must also submit a completed "Statement of Good Standing Form" explaining the circumstances of any previous exit from any health science program. The letter must be sent from the program director at the time of the student's previous enrollment. CCCC's Physical Therapist Assistant Department Chair and Vice President of Student Services must approve students who were dismissed, expelled, or suspended for any reason. Students who withhold previous exit information may be dismissed from the program.

It is the applicant's responsibility to ensure that requirements are met by the established deadline.

More information can be found on the Limited Enrollment Website.

**Placement Test Scores**

Students must be eligible to take their gateway Math and English course in order to be eligible to apply. This can be achieved through a High School Unweighted GPA of 2.6 or higher or by presenting acceptable test scores such as SAT, ACT, Accuplacer,, or other acceptable scores

The checklist for the Physical Therapist Assistant program indicates the minimum scores required to place into ENG 111 and at minimum MAT 143. Students who have an unweighted high school GPA of 2.6 or higher, have met Multiple Measures for Placement or who have earned appropriate transfer credit in English, Math, or developmental courses with a C, P2 for English, or P2 for MAT-143 or MAT-152 and P3 or MAT-171, or higher may be exempt from placement testing.

**GPA**

Students must be in good academic standing upon applying to health science programs. Good academic standing is defined as having a 3.0 GPA or higher based on the general education courses for the program. Students can apply if they have a 2.8-3.0 GPA but will be placed on an alternate list. Alternates will be considered if there are not enough applicants to fill all seats. These GPA requirements must be maintained at the time of entering the program from a secondary or post-secondary institution.

**General Education Courses**

The following courses are required to be completed prior to applying: PHY-110/110A, BIO-168, BIO-169 with a grade of "B" or better, and ENG-111 with a grade of "C" or better. The following courses are required to be completed with a grade of "C" or better prior to graduation: PSY-150, Communications Elective, Humanities Elective, & ACA-122.

**Observation Hours**
The completion of twenty hours of observation/work/voluntary experience in the physical therapy field is required. The observation form is located on the Limited Enrollment Website under the Physical Therapist Assistant Program.

**The Test of English as a Foreign Language (TOEFL)**

TOEFL scores are required for any naturalized or non-US citizens who speak English as their second language. This test provides evidence of adequate proficiency in the English language. All test scores must be less than five years old. The minimum acceptable TOEFL scores are based on the following formats: TOEFL iBT Total Score - **80** or higher

TOEFL Essential Overall Band Score: **8** or higher. The test is offered at multiple testing sites nationally or can be taken online and is at the student's expense.

**B. REQUIREMENTS AFTER ACCEPTANCE:**

**Criminal Background Check/Drug Screening**
A criminal background check and drug screening are required for all accepted Health Sciences students. Clinical affiliates will review criminal background reports and drug screenings of students and reserve the right to accept or deny any students based on their consideration of these reports. Negative reports and/

or failed screenings may prevent a student from attending the clinical portion of their prescribed program and ultimately be dismissed from the program. This could result in a student's withdrawal from the program. Students are subject to criminal background checks and drug screenings at any time during the program. Clinical agencies reserve the right to require additional background checks and drug screens.

**Medical Forms/Immunizations**
Applicants are required to submit a completed college approved student medical health form to the required document tracking system by the assigned date. The student's medical form must include a satisfactory health history, physical examination, and immunization report. Failure to submit a completed medical form will result in loss of Physical Therapist Assistant Program admission status and class space will be assigned to another applicant. No student will be permitted to participate in clinic without having submitted a completed medical form.

**BLS Provider CPR**
CPR Certification by the American Heart Association (AHA) in BLS Provider (Basic Life Support including CPR and AED) that includes both performance and testing of criteria is required prior to clinical rotations. Students are responsible for keeping their CPR certification current throughout the duration of the program.

**Mandatory Orientation Session**
When notified of acceptance, applicants must attend a mandatory orientation session with the Physical Therapist Assistant Department.

**Liability/Malpractice Insurance**
Malpractice insurance is required for health sciences students and is assessed as a student fee.

**Transportation/Additional Class/Course Materials**
Health Sciences students are responsible for their own transportation to off-campus clinical/learning sites. Materials other than textbooks will be required and are purchased at the student's expense.

**Technical Standards**
The Health Sciences Programs are physically demanding. Students will be expected to perform lifting, pushing, pulling, and carrying tasks to successfully practice in a lab setting, complete clinical affiliations, and safely treat patients. For more details, please refer to each program of study's physical requirements and technical standards.

**Communicable Disease Statement**
As a healthcare provider, students enrolled in the Physical Therapist Assistant Program are exposed to communicable diseases. Students will be trained in standard precautions and asepsis techniques to minimize the potential of transmission. Students will act as peer patients during the program and will be expected to share medical information during clinical treatment.

**Employment Opportunities**
Graduates may be eligible to take the licensure examination administered by the NC Board of Physical Therapy Examiners. A student with a felony may not be eligible for licensure or employment. Employment is available in, but not limited to, general hospitals, rehabilitation centers, skilled nursing facilities, specialty hospitals, home health agencies, private clinics, and public school systems.

Competitive admissions are anticipated for a challenging program that leads to an intensely satisfying career. The program will admit a maximum of 24 students each Fall Semester.

**Academic Standards**
Upon official acceptance, Health Sciences students are required to maintain the necessary GPA requirements for entry. Students cannot enter a Health Sciences program while on academic suspension. Students may withdraw or be withdrawn from a Health Sciences course; however, the student will not be allowed to matriculate through their program of study. Reapplication to the program will be required and readmission will be awarded based on the completion of admissions criteria, the policy for readmission, and space availability. Students requesting readmission must meet with the Education Navigator and Department Chair to review their file.

**Program Specific Academic Standards:** See the Physical Therapist Assistant Program Manual and specific Physical Therapist Assistant Program course syllabi.

Physical Therapist Assistant Program technical courses must be taken in succession as they appear in the curriculum guide. Physical Therapist Assistant Program students must meet the standards related to the demonstration of emotional and physical health within the framework of physical therapy practice and must adhere to the other policies set forth in the Physical Therapist Assistant Program Manual. Physical Therapist Assistant students must not be on suspension status.

**C. REINSTATEMENT INTO THE PHYSICAL THERAPIST ASSISTANT PROGRAM**

Students who wish to be considered for reinstatement should reapply using the Reinstatement Procedure listed in the Physical Therapist Assistant Program Manual. The reinstatement process will only be offered once. There is no guarantee of reinstatement for any student.

To begin the reinstatement process, the student must apply in writing to the Department Chair requesting reinstatement in the program. The letter must include the date the student wishes to return and a rationale describing how the student plans to complete the program successfully. The letter must be received by the Department Chair no later than 60 days prior to the first day of the academic semester into which the student wishes to reenroll. The Progressions Committee will meet within 3 weeks of receipt of the letter to consider the reinstatement request and complete a plan of action to address the reasons for withdrawal/dismissal.

The Department Chair will formally notify the student of their decision and plan of action within 5 business days of the meeting. If remediation or other action is warranted, it must be successfully completed no less than 7 calendar days prior to the start of the semester in which the student wishes to reenroll. If this does not occur, the student must reinitiate the reinstatement process. The final decision for acceptance into the next cohort will be based upon available slots in the cohort, successful completion of any actions required by the Department Chair, and a reasonable expectation that the student in question has the potential to succeed in the program.

# A45630 - Health and Fitness Science AAS

## Overview

**Program Code**
A45630

**Program Description**
The Health and Fitness Science program is designed to provide students with the knowledge and skills necessary for employment in the fitness and exercise industry.

Students will be trained in exercise science and be able to administer basic fitness tests and health risk appraisals, teach specific exercise and fitness classes and provide instruction in the proper use of exercise equipment and facilities.

Graduates should qualify for employment opportunities in commercial fitness clubs, YMCA's/YWCA's, wellness programs in business and industry, Parks & Recreation Departments and other organizations implementing exercise & fitness programs.

**Career Pathway Options**
Associate in Applied Science Degree in Health and Fitness Science, Diploma, Certificate

**Career Community**
Health Sciences

**Program Length**
5 semesters

**Credential**
Associate in Applied Science

## Program Outcomes

## Degree Maps

Health & Fitness Science, Associate in Applied Science Degree

**Total Credits**
65

| Semester | Term | Term Credits |
|---|---|---|
| 1st Semester | Fall | 17 |

**Courses**
- ACA122 - College Transfer Success

**Term Credits** 1

**Courses**
- ENG111 - Writing and Inquiry

**Term Credits** 3

**Courses**
- HEA112 - First Aid & CPR

**Term Credits** 2

**Courses**
- HFS110 - Exercise Science

**Term Credits** 4

**Courses**
- HFS111 - Fitness & Exercise Testing I

**Term Credits** 4

**Courses**
- Humanities/Fine Arts Elective (Generic)

**Term Credits** 3

| Semester | Term | Term Credits |
|---|---|---|
| 2nd Semester | Spring | 13 |

**Courses**
- HFS116 - Prevention & Care of Exercise Injuries

**Term Credits** 3

**Courses**
- HFS120 - Group Exercise Instruction

**Term Credits** 3

**Courses**
- HFS210 - Personal Training

**Term Credits** 3

**Courses**
- PED117 - Weight Training I

**Term Credits** 1

**Courses**
- PSY150 - General Psychology

**Term Credits** 3

| Semester | Term | Term Credits |
|---|---|---|
| 3rd Semester | Summer | 8 |

**Courses**
- BIO155 - Nutrition

**Term Credits** 3

**Courses**
- HFS218 - Lifestyle Change & Wellness

**Term Credits** 4

**Courses**
- PED122 - Yoga I
  **OR**
- PED113 - Aerobics I
  **OR**
- PED277 - Ultimate Frisbee

**Term Credits** 1

| Semester | Term | Term Credits |
|---|---|---|
| 4th Semester | Fall | 15 |

**Courses**
- BIO168 - Anatomy and Physiology I

**Term Credits** 4

**Courses**
- HFS118 - Fitness Facility Management

**Term Credits** 4

**Courses**
- Communications Elective (Generic)

**Term Credits** 3

**Courses**
- MAT152 - Statistical Methods I
  **OR**
- MAT171 - Precalculus Algebra

**Term Credits** 4

| Semester | Term | Term Credits |
|---|---|---|
| 5th Semester | Spring | 12 |

**Courses**
- BIO169 - Anatomy and Physiology II

**Term Credits** 4

**Courses**

- BUS230 - Small Business Management

**Term Credits** 3

**Courses**

- HFS212 - Exercise Programming

**Term Credits** 3

**Courses**

- PED110 - Fit and Well for Life

**Term Credits** 2

## Approved AAS Electives

**Approved AAS Electives (C-L-SHC)**

| APPROVED HUMANITIES/FINE ARTS ELECTIVES | APPROVED SOCIAL/BEHAVIORAL SCIENCE ELECTIVES |
|---|---|
| ART 111 Art Appreciation 3-0-3 | ANT 210 General Anthropology 3-0-3 |
| ART 114 Art History Survey I 3-0-3 | ANT 220 Cultural Anthropology 3-0-3 |
| ART 115 Art History Survey II 3-0-3 | ECO 151 Survey of Economics 3-0-3 |
| DRA 111 Theatre Appreciation 3-0-3 | ECO 251 Principles of Microeconomics 3-0-3 |
| ENG 125 Creative Writing I 3-0-3 | ECO 252 Principles of Macroeconomics 3-0-3 |
| ENG 231 American Literature I 3-0-3 | HIS 111 World Civilization I 3-0-3 |
| ENG 232 American Literature II 3-0-3 | HIS 112 World Civilization II 3-0-3 |
| *ENG 241 British Literature I 3-0-3 | HIS 131 American History I 3-0-3 |
| *ENG 242 British Literature II 3-0-3 | HIS 132 American History II 3-0-3 |
| HUM 110 Technology and Society 3-0-3 | HIS 222 African-American History I 3-0-3 |
| HUM 115 Critical Thinking 3-0-3 | HIS 223 African-American History II 3-0-3 |
| HUM 120 Cultural Studies 3-0-3 | HIS 226 The Civil War 3-0-3 |
| HUM 122 Southern Culture 3-0-3 | HIS 236 North Carolina History 3-0-3 |
| HUM 150 American Women's Studies 3-0-3 | POL 120 American Government 3-0-3 |
| HUM 160 Introduction to Film 2-2-3 | PSY 150 General Psychology 3-0-3 |
| MUS 110 Music Appreciation 3-0-3 | PSY 237 Social Psychology 3-0-3 |
| MUS 112 Introduction to Jazz 3-0-3 | PSY 241 Developmental Psychology 3-0-3 |
| PHI 240 Introduction to Ethics 3-0-3 | PSY 246 Adolescent Psychology 3-0-3 |
| REL 110 World Religions 3-0-3 | PSY 281 Abnormal Psychology 3-0-3 |
| REL 211 Intro to Old Testament 3-0-3 | SOC 210 Introduction to Sociology 3-0-3 |
| REL 212 Intro to New Testament 3-0-3 | SOC 213 Sociology of the Family 3-0-3 |
| | SOC 220 Social Problems 3-0-3 |
| | SOC 225 Social Diversity 3-0-3 |
| | SOC 232 Social Context of Aging 3-0-3 |
| *Not applicable for some health sciences programs.* | SOC 240 Social Psychology 3-0-3 |

## Admissions Requirements

**Admissions Requirements**

See additional Program Specific Standards in the Health and Fitness Science Program Guide and specific Health and Fitness Science course syllabus.

Health and Fitness Science and progressive related courses must be taken in succession as they appear in the curriculum guide. Health and Fitness Science students must adhere to the other policies set forth in the Health and Fitness Science Program Guide.

# A45780 - Veterinary Medical Technology AAS

## Overview

**Program Code**
A45780

**Program Description**
The Veterinary Medical Technology curriculum is designed to prepare individuals to assist veterinarians in preparing animals, equipment, and medications for examination and surgery; collecting specimens; performing laboratory, radiographic, anesthetic, dental procedures; assisting in surgery; and providing proper husbandry of animals and their environment.

Course work includes instruction in veterinary anatomy, nutrition, parasitology, pathology, physiology, radiology, terminology, zoology, office practices, laboratory techniques, dentistry, and small and large animal clinical practices.

Graduates of accredited programs may be eligible to take state and national examinations administered by the North Carolina Veterinary Medical Board. Graduates may be employed in veterinary clinics; diagnostic, research, or pharmaceutical laboratories; zoos; academic institutions; or other areas associated with animal care.

**Career Pathway Options**
Associate in Applied Science in Veterinary Medical Technology

**Career Community**
Health Sciences

**Program Length**
5 semesters

**Credential**
Associate in Applied Science

## Program Outcomes

## Degree Maps

Veterinary Medical Technology, Associate in Applied Science Degree
**Total Credits**
71

| Semester | Term | Term Credits |
|---|---|---|
| 1st Semester | Fall | 15 |

**Courses**
- ACA122 - College Transfer Success

**Term Credits** 1

**Courses**
- MAT110 - Mathematical Measurement and Literacy

**Term Credits** 3

**Courses**
- VET110 - Animal Breeds and Husbandry

**Term Credits** 3

**Courses**
- VET114 - Introduction to Veterinary Medicine Technology

**Term Credits** 1

**Courses**
- VET120 - Veterinary Anatomy & Physiology

**Term Credits** 4

**Courses**
- VET121 - Veterinary Medical Terminology

**Term Credits** 3

| Semester | Term | Term Credits |
|---|---|---|
| 2nd Semester | Spring | 17 |

**Courses**
- CHM130 - General, Organic, & Biochemistry

**Term Credits** 3

**Courses**
- CHM130A - General, Organic, & Biochemistry Lab

**Term Credits** 1

**Courses**
- ENG111 - Writing and Inquiry

**Term Credits** 3

**Courses**
- VET123 - Veterinary Parasitology

**Term Credits** 3

**Courses**
- VET125 - Veterinary Diseases I

**Term Credits** 2

**Courses**
- VET137 - Veterinary Office Practices

**Term Credits** 2

**Courses**
- Humanities/Fine Arts Electives (See HSAP) (Generic)

**Term Credits** 3

| Semester | Term | Term Credits |
|---|---|---|
| 3rd Semester | Summer | 9 |

**Courses**
- VET131 - Veterinary Lab Techniques I

**Term Credits** 3

**Courses**
- VET133 - Veterinary Clinical Practice I

**Term Credits** 3

**Courses**
- Social/Behavioral Science Elective (see HSAP) (Generic)

**Term Credits** 3

| Semester | Term | Term Credits |
|---|---|---|
| 4th Semester | Fall | 16 |

**Courses**
- VET126 - Veterinary Diseases II

**Term Credits** 2

**Courses**
- VET211 - Veterinary Lab Techniques II

**Term Credits** 3

**Courses**
- VET213 - Veterinary Clinical Practice II

**Term Credits** 4

**Courses**
- VET215 - Veterinary Pharmacology

**Term Credits** 3

**Courses**
- WBL112AB - Work-Based Learning I

**Term Credits** 1

**Courses**
- Communications Elective (Generic)

**Term Credits** 3

| Semester | Term | Term Credits |
|---|---|---|
| 5th Semester | Spring | 14 |

**Courses**
- VET212 - Veterinary Lab Techniques III

**Term Credits** 3

**Courses**
- VET214 - Veterinary Clinical Practice III

**Term Credits** 4

**Courses**
- VET217 - Large Animal Clinical Practice

**Term Credits** 3

**Courses**
- VET237 - Animal Nutrition

**Term Credits** 3

**Courses**
- WBL112BB (Generic)

**Term Credits** 1

## Approved AAS Electives

**Approved AAS Electives (C-L-SHC)**

| APPROVED HUMANITIES/FINE ARTS ELECTIVES | APPROVED SOCIAL/BEHAVIORAL SCIENCE ELECTIVES |
|---|---|
| ART 111 Art Appreciation 3-0-3 | ANT 210 General Anthropology 3-0-3 |
| ART 114 Art History Survey I 3-0-3 | ANT 220 Cultural Anthropology 3-0-3 |
| ART 115 Art History Survey II 3-0-3 | ECO 151 Survey of Economics 3-0-3 |
| DRA 111 Theatre Appreciation 3-0-3 | ECO 251 Principles of Microeconomics 3-0-3 |
| ENG 125 Creative Writing I 3-0-3 | ECO 252 Principles of Macroeconomics 3-0-3 |
| ENG 231 American Literature I 3-0-3 | HIS 111 World Civilization I 3-0-3 |
| ENG 232 American Literature II 3-0-3 | HIS 112 World Civilization II 3-0-3 |
| *ENG 241 British Literature I 3-0-3 | HIS 131 American History I 3-0-3 |
| *ENG 242 British Literature II 3-0-3 | HIS 132 American History II 3-0-3 |
| HUM 110 Technology and Society 3-0-3 | HIS 222 African-American History I 3-0-3 |
| HUM 115 Critical Thinking 3-0-3 | HIS 223 African-American History II 3-0-3 |
| HUM 120 Cultural Studies 3-0-3 | HIS 226 The Civil War 3-0-3 |
| HUM 122 Southern Culture 3-0-3 | HIS 236 North Carolina History 3-0-3 |
| HUM 150 American Women's Studies 3-0-3 | POL 120 American Government 3-0-3 |
| HUM 160 Introduction to Film 2-2-3 | PSY 150 General Psychology 3-0-3 |
| MUS 110 Music Appreciation 3-0-3 | PSY 237 Social Psychology 3-0-3 |
| MUS 112 Introduction to Jazz 3-0-3 | PSY 241 Developmental Psychology 3-0-3 |
| PHI 240 Introduction to Ethics 3-0-3 | PSY 246 Adolescent Psychology 3-0-3 |
| REL 110 World Religions 3-0-3 | PSY 281 Abnormal Psychology 3-0-3 |
| REL 211 Intro to Old Testament 3-0-3 | SOC 210 Introduction to Sociology 3-0-3 |
| REL 212 Intro to New Testament 3-0-3 | SOC 213 Sociology of the Family 3-0-3 |
| | SOC 220 Social Problems 3-0-3 |
| *Not applicable for some health sciences programs.* | SOC 225 Social Diversity 3-0-3 |
| | SOC 232 Social Context of Aging 3-0-3 |
| | SOC 240 Social Psychology 3-0-3 |

## Limited Enrollment Program Information

**Limited Enrollment Curriculum:**

The Veterinary Medical Technology program is a limited enrollment curriculum and program applicants are accepted based upon a selective admission process. Admission criteria for the Veterinary Medical Technology program are reviewed annually and are subject to change.

**A. PROGRAM SPECIFIC ENTRANCE STANDARDS:**

**Admissions Process:**

A student may apply to the Veterinary Medical Technology Program once minimum admissions criteria are met.

Prospective applicants are required to complete the Health Sciences information session as well as contact their Education Navigator prior to developing a plan for completing minimum requirements. The Education Navigator will review each applicant's progress, and provide further guidance once all minimum admission requirements are met.

Once an applicant has completed all general admissions criteria and all Veterinary Medical Technology Program entrance requirements, they must submit a completed Limited Enrollment Application. Applicants who meet all requirements will be ranked according to the order in which they applied.

During the initial consideration, applicants will have an opportunity to indicate first and second choice programs when completing the Limited Enrollment Application. If seats do not fill after the initial consideration and after second choice candidates are considered, applicants will be admitted on a first qualified, first accepted basis up until the date of the required mandatory health science orientation.

Applicants who do not gain entry but want to gain entry in a future year do not need to resubmit their application. Applicants will remain on the active applicant list as long as they are interested in being considered for the program.

Applicants must also submit a completed "Statement of Good Standing Form" explaining the circumstances of any previous exit from any health science program. The letter must be sent from the program director at the time of the student's previous enrollment. CCCC's Nursing Department Chair and Vice President of Student Services must approve students who were dismissed, expelled, or suspended for any reason. Students who withhold previous exit information may be dismissed from the program.

It is the applicant's responsibility to ensure that requirements are met by the established deadline.

More information can be found on the Limited Enrollment Website.

**Placement Test Scores**

Students must be eligible to take their gateway Math and English course in order to be eligible to apply. This can be achieved through a High School Unweighted GPA of 2.8 or higher or by presenting acceptable test scores such as SAT, ACT, Accuplacer, RISE Assessment scores, or other acceptable scores (within the past 10 years).

The checklist for the Medical Sonography Program indicates the minimum scores required to place into ENG 111 and MAT 110. Students who have an unweighted high school GPA of 2.8 or higher, have met Multiple Measures for Placement or who have earned appropriate transfer credit in English, Math, or developmental courses with a C, P2 for English, or P1 for Math, or higher may be exempt from placement testing.

**GPA**

Students must be in good academic standing upon applying to health science programs. Good academic standing is defined as having a 2.5 GPA or higher based on the general education courses for the program. Students can apply if they have a 2.0-2.5 GPA but will be placed on an alternate list. Alternates will be considered if there are not enough applicants to fill all seats. These GPA requirements must be maintained at the time of entering the program from a secondary or post-secondary institution.

**General Education Courses**

The following courses are required to be completed with a grade of "B" or better prior to applying: CHM-130/130A. The following courses are required to be completed with a grade of "C" or better prior to applying: ENG-111, MAT-110, Social Science Elective, Communications Elective, Humanities Elective, & ACA-122.

**The Test of English as a Foreign Language (TOEFL)**

TOEFL scores are required for any naturalized or non-US citizens who speak English as their second language. This test provides evidence of adequate proficiency in the English language. All test scores must be less than five years old. The minimum acceptable TOEFL scores are based on the following formats: TOEFL iBT Total Score - **80** or higher TOEFL Essential Overall Band Score: **8** or higher. The test is offered at multiple testing sites nationally or can be taken online and is at the student's expense.

**Observation Hours *(Highly Recommended, Not Required)***

The completion of forty hours of observation/work/voluntary experience in the Veterinary Medical Technology field is highly recommended. The observation form is located on the Limited Enrollment Website under the Veterinary Medical Technology Program.

**B. REQUIREMENTS AFTER ACCEPTANCE:**

**Criminal Background Check/Drug Screening**

A criminal background check and drug screening will be required for all accepted Health Sciences students. Clinical affiliates will review criminal background reports and drug screenings of students and reserve the right to accept or deny any students based on their consideration of these reports. Negative reports and/or failed screenings can preclude a student from attending the clinical portion of their prescribed program and thus, will result in the student's exit from the program. Students are subject to drug screening at any time during a clinical rotation. Clinical agencies reserve the right to require additional background checks and drug screens.

**Medical Forms/Immunizations**

Applicants are required to submit a completed college approved student medical health form to the required document tracking system by the assigned date. The student medical form must include satisfactory health history, physical examination, and immunization report. Failure to submit the required information by the assigned date will result in loss of Veterinary Medical Technology admission status and class space will be assigned to another applicant.

**Rabies series required prior to the first Fall semester.

**Mandatory Orientation Session**

When notified of acceptance, applicants must attend a mandatory orientation session with the Veterinary Medical Technology department.

**Liability/Malpractice Insurance**

Malpractice insurance is required for health sciences students and is assessed as a student fee.

**Transportation/Additional Class/Course Materials**

Health Sciences students are responsible for their own transportation to off-campus clinical/learning sites. Materials other than textbooks will be required and are purchased at student's expense.

**Technical Standards**

The Health Sciences programs are physically demanding. Students will be expected to perform lifting, pushing, pulling, and carrying tasks to successfully practice in a lab setting, complete clinical affiliations, and safely treat patients. For more details, please refer to each program of study's physical requirements and technical standards.

**Academic Standards**

Upon official acceptance, Health Sciences students are required to maintain the necessary GPA requirements for entry. Students cannot enter a Health Sciences program while on academic suspension. Health Sciences students must achieve a grade of "C" or higher in their Health Science courses. Students may withdraw or be withdrawn from a Health Sciences course. However, the student will not be allowed to matriculate through their program of study. Reapplication to the program will be required and readmission will be awarded based on admissions

criteria completion, policy on readmission, and space availability. Students completing readmission must meet with the Education Navigator to review their file.

Program Specific Academic Standards: See the Veterinary Medical Technology Student Handbook and specific Veterinary Medical Technology course syllabi.

Veterinary Medical Technology students must maintain an overall and semester GPA 2.0 or better, and must have a grade of "C" or better in all courses required by the Veterinary Medical Technology curriculum. Veterinary Medical Technology and progressive related courses must be taken in succession as they appear in the curriculum guide. Veterinary Medical Technology students must meet the standards related to demonstration of emotional and physical health within the framework of Veterinary Medical Technology practice and must adhere to the other policies set forth in the Veterinary Medical Technology Student Policies and Procedures Manual. Veterinary Medical Technology students must not be on probation or suspension status.

**C. RE-ADMISSION OR TRANSFER INTO THE VETERINARY MEDICAL TECHNOLOGY PROGRAM**

The student must qualify under the admission criteria in effect at time of readmission or transfer. A student may be required to re-enter a Veterinary Medical Technology course earlier in the curriculum sequence if the student is lacking major content. All Veterinary Medical Technology courses completed more than three years prior to re-admission or transfer must either be challenged by exam, including passing an assessment of all skills and/or competencies covered in that course, or the course must be repeated. Withdrawal or academic failure within the Veterinary Medical Technology program will require the student to reapply. Advanced placement is dependent upon space availability.

The Veterinary Medical Technology Program Director will evaluate transferability of all Veterinary Medical Technology courses. Transfer courses must be equivalent to courses required at the receiving college in both theory and clinical experiences. The student must provide copies of course syllabi and outlines for those Veterinary Medical Technology courses taken to the Veterinary Medical Technology Program Director. Students lacking essential content may be required to audit a portion of a course, challenge the content, demonstrate skills, or repeat the course as deemed necessary. The final decision for transfer credit for Veterinary Medical Technology courses is determined by the Veterinary Medical Technology Program Director.

Applicants must submit a letter explaining the circumstances of any previous exit from any health science program. The letter must be sent from the Program Director at the former institution. CCCC's Veterinary Medical Technology Program Director and Vice-President of Student Services must approve students who were dismissed, expelled, or suspended for any reason. Students who withhold previous exit information may be dismissed from the program. A remediation plan may be required.

# A50210 - Computer-Integrated Machining Technology AAS

## Overview

**Program Code**
A50210

**Program Description**
The Computer-Integrated Machining curriculum prepares students with the analytical, creative and innovative skills necessary to take a production idea from an initial concept through design, development and production, resulting in a finished product.

Coursework may include manual machining, computer applications, engineering design, computer-aided drafting (CAD), computer-aided machining (CAM), blueprint interpretation, advanced computerized numeric control (CNC) equipment, basic and advanced machining operations, precision measurement and high-speed multi-axis machining.

Graduates should qualify for employment as machining technicians in high-tech manufacturing, rapid-prototyping and rapid-manufacturing industries, specialty machine shops, fabrication industries, and high-tech or emerging industries such as aerospace, aviation, medical, and renewable energy, and to sit for machining certification examinations.

**Career Pathway Options**
Associate in Applied Science in Computer-Integrated Machining with an Emphasis in Tool, Die and Mold Making

**Career Community**
Applied Technologies

**Program Length**
6 semesters

**Credential**
Associate in Applied Science

## Program Outcomes

## Degree Maps

Computer-Integrated Machining Associate in Applied Science Degree
**Total Credits**
64

| Semester | Term | Term Credits |
|---|---|---|
| 1st Semester | Fall | 16 |

**Courses**
- BPR111 - Print Reading

**Term Credits** 2

**Courses**
- CIS111 - Basic PC Literacy

**Term Credits** 2

**Courses**
- MAC111 - Machining Technology I

**Term Credits** 6

**Courses**
- MAC171 - Measure/Material and Safety

**Term Credits** 1

**Courses**
- MAT110 - Mathematical Measurement and Literacy

**Term Credits** 3

**Courses**
- MEC142 - Physical Metallurgy

**Term Credits** 2

| Semester | Term | Term Credits |
|---|---|---|
| 2nd Semester | Spring | 15 |

**Courses**
- BPR121 - Blueprint Reading-Mechanical

**Term Credits** 2

**Courses**
- ENG111 - Writing and Inquiry

**Term Credits** 3

**Courses**
- MAC112 - Machining Technology II

**Term Credits** 6

**Courses**
- MAC124 - CNC Milling

**Term Credits** 2

**Courses**
- MAC152 - Advanced Machining Calculations

**Term Credits** 2

| Semester | Term | Term Credits |
|---|---|---|
| 3rd Semester | Summer | 6 |

**Courses**
- MAC113 - Machining Technology III

**Term Credits** 6

| Semester | Term | Term Credits |
|---|---|---|
| 4th Semester | Fall | 14 |

**Courses**
- ENG114 - Professional Research & Reporting

**Term Credits** 3

**Courses**
- MAC122 - CNC Turning

**Term Credits** 2

**Courses**
- MAC153 - Compound Angles

**Term Credits** 2

**Courses**
- MAC241 - Jigs & Fixtures I

**Term Credits** 4

**Courses**
- Humanities/Fine Arts Requirement (Generic)

**Term Credits** 3

| Semester | Term | Term Credits |
|---|---|---|
| 5th Semester | Spring | 13 |

**Courses**
- MAC224 - Advanced CNC Milling

**Term Credits** 2

**Courses**
- MAC226 - CNC EDM Machining

**Term Credits** 2

**Courses**
- MAC243 - Die Making I

**Term Credits** 4

**Courses**
- MEC110 - Introduction to CAD/CAM

**Term Credits** 2

**Courses**
- Social/Behavioral Science requirement (Generic)

**Term Credits** 3

## Approved AAS Electives

**Approved AAS Electives (C-L-SHC)**

| APPROVED HUMANITIES/FINE ARTS ELECTIVES | APPROVED SOCIAL/BEHAVIORAL SCIENCE ELECTIVES |
|---|---|
| ART 111 Art Appreciation 3-0-3 | ANT 210 General Anthropology 3-0-3 |
| ART 114 Art History Survey I 3-0-3 | ANT 220 Cultural Anthropology 3-0-3 |
| ART 115 Art History Survey II 3-0-3 | ECO 151 Survey of Economics 3-0-3 |
| DRA 111 Theatre Appreciation 3-0-3 | ECO 251 Principles of Microeconomics 3-0-3 |
| ENG 125 Creative Writing I 3-0-3 | ECO 252 Principles of Macroeconomics 3-0-3 |
| ENG 231 American Literature I 3-0-3 | HIS 111 World Civilization I 3-0-3 |
| ENG 232 American Literature II 3-0-3 | HIS 112 World Civilization II 3-0-3 |
| *ENG 241 British Literature I 3-0-3 | HIS 131 American History I 3-0-3 |
| *ENG 242 British Literature II 3-0-3 | HIS 132 American History II 3-0-3 |
| HUM 110 Technology and Society 3-0-3 | HIS 222 African-American History I 3-0-3 |
| HUM 115 Critical Thinking 3-0-3 | HIS 223 African-American History II 3-0-3 |
| HUM 120 Cultural Studies 3-0-3 | HIS 226 The Civil War 3-0-3 |
| HUM 122 Southern Culture 3-0-3 | HIS 236 North Carolina History 3-0-3 |
| HUM 150 American Women's Studies 3-0-3 | POL 120 American Government 3-0-3 |
| HUM 160 Introduction to Film 2-2-3 | PSY 150 General Psychology 3-0-3 |
| MUS 110 Music Appreciation 3-0-3 | PSY 237 Social Psychology 3-0-3 |
| MUS 112 Introduction to Jazz 3-0-3 | PSY 241 Developmental Psychology 3-0-3 |
| PHI 240 Introduction to Ethics 3-0-3 | PSY 246 Adolescent Psychology 3-0-3 |
| REL 110 World Religions 3-0-3 | PSY 281 Abnormal Psychology 3-0-3 |
| REL 211 Intro to Old Testament 3-0-3 | SOC 210 Introduction to Sociology 3-0-3 |
| REL 212 Intro to New Testament 3-0-3 | SOC 213 Sociology of the Family 3-0-3 |
| | SOC 220 Social Problems 3-0-3 |
| | SOC 225 Social Diversity 3-0-3 |
| | SOC 232 Social Context of Aging 3-0-3 |
| *Not applicable for some health sciences programs.* | SOC 240 Social Psychology 3-0-3 |

# A50240 - Industrial Systems Technology AAS

## Overview

**Program Code**
A50240

**Program Description**
The Industrial Systems Technology curriculum is designed to prepare or upgrade individuals to safely service, maintain, repair, or install equipment. Instruction includes theory and skill training needed for inspecting, testing, troubleshooting, and diagnosing industrial systems.

Students will learn multi-craft technical skills in print reading, mechanical systems maintenance, electricity, hydraulics/pneumatics, welding, machining or fabrication, and includes various diagnostic and repair procedures. Practical application in these industrial systems will be emphasized and additional advanced course work may be offered.

Upon completion of this curriculum, graduates should be able to individually, or with a team, safely install, inspect, diagnose, repair, and maintain industrial process and support equipment. Students will also be encouraged to develop their skills as life-long learners.

**Career Pathway Options**
Associate in Applied Science in Industrial Systems Technology

**Career Community**
Applied Technologies

**Program Length**
5 semesters

**Credential**
Associate in Applied Science

## Program Outcomes

## Degree Maps

Industrial Systems Technology, Associated in Applied Science
**Total Credits**
70 - 72

| Semester | Term | Term Credits |
|---|---|---|
| 1st Semester | Fall | 17 |

**Courses**
- BPR111 - Print Reading

**Term Credits** 2

**Courses**
- CIS111 - Basic PC Literacy

**Term Credits** 2

**Courses**
- ELC112 - DC/AC Electricity

**Term Credits** 5

**Courses**
- MEC111 - Machine Processes I

**Term Credits** 3

**Courses**
- MNT110 - Introduction to Maintenance Procedures

**Term Credits** 2

**Courses**
- Humanities/Fine Arts Elective (Generic)

**Term Credits** 3

| Semester | Term | Term Credits |
|---|---|---|
| 2nd Semester | Spring | 19 |

**Courses**
- ACA122 - College Transfer Success

**Term Credits** 1

**Courses**
- ELC128 - Introduction to Programmable Logic Controller

**Term Credits** 3

**Courses**
- ENG111 - Writing and Inquiry

**Term Credits** 3

**Courses**
- MNT111 - Maintenance Practices

**Term Credits** 3

**Courses**
- PHY121 - Applied Physics I

**Term Credits** 4

**Courses**
- WLD112 - Basic Welding Processes

**Term Credits** 2

**Courses**
- WLD117 - Industrial SMAW

**Term Credits** 3

| Semester | Term | Term Credits |
|---|---|---|
| 3rd Semester | Summer | 10 |

**Courses**
- AHR120 - HVACR Maintenance
  **OR**
- ATR112 - Introduction to Automation

**Term Credits** 2

**Courses**
- ELN260 - Programmable Logic Controllers

**Term Credits** 4

**Courses**
- ISC110 - Workplace Safety
  **OR**
- ISC112 - Industrial Safety

**Term Credits** 1

**Courses**
- HYD110 - Hydraulics/Pneumatics I

**Term Credits** 3

| Semester | Term | Term Credits |
|---|---|---|
| 4th Semester | Fall | 13 |

**Courses**
- ELC117 - Motors and Controls

**Term Credits** 4

**Courses**
- ENG116 - Technical Report Writing

**Term Credits** 3

**Courses**
- HYD121 - Hydraulics/Pneumatics II

**Term Credits** 2

**Courses**
- ELC228 - Programmable Logic Controllers Applications

**Term Credits** 4

| Semester | Term | Term Credits |
|---|---|---|
| 5th Semester | Spring | 11 - 13 |

**Courses**
- ELN231 - Industrial Controls

**Term Credits** 3

**Courses**
- MNT240 - Indust Equip Troubleshoot

**Term Credits** 2

**Courses**
- WBL111 - Work-Based Learning I

**Term Credits** 1

**Courses**
- Social/Behavioral Science Elective (Generic)

**Term Credits** 3

**Courses**
- ELC229 - Applications Project
  **OR**
- ISC132 - Manufacturing Quality Control
  **OR**
- WLD121 - GMAW (MIG) FCAW/Plate

**Term Credits** 2 - 4

## Approved AAS Electives

**Approved AAS Electives (C-L-SHC)**

| APPROVED HUMANITIES/FINE ARTS ELECTIVES | APPROVED SOCIAL/BEHAVIORAL SCIENCE ELECTIVES |
|---|---|
| ART 111 Art Appreciation 3-0-3 | ANT 210 General Anthropology 3-0-3 |
| ART 114 Art History Survey I 3-0-3 | ANT 220 Cultural Anthropology 3-0-3 |
| ART 115 Art History Survey II 3-0-3 | ECO 151 Survey of Economics 3-0-3 |
| DRA 111 Theatre Appreciation 3-0-3 | ECO 251 Principles of Microeconomics 3-0-3 |
| ENG 125 Creative Writing I 3-0-3 | ECO 252 Principles of Macroeconomics 3-0-3 |
| ENG 231 American Literature I 3-0-3 | HIS 111 World Civilization I 3-0-3 |
| ENG 232 American Literature II 3-0-3 | HIS 112 World Civilization II 3-0-3 |
| *ENG 241 British Literature I 3-0-3 | HIS 131 American History I 3-0-3 |
| *ENG 242 British Literature II 3-0-3 | HIS 132 American History II 3-0-3 |
| HUM 110 Technology and Society 3-0-3 | HIS 222 African-American History I 3-0-3 |
| HUM 115 Critical Thinking 3-0-3 | HIS 223 African-American History II 3-0-3 |
| HUM 120 Cultural Studies 3-0-3 | HIS 226 The Civil War 3-0-3 |
| HUM 122 Southern Culture 3-0-3 | HIS 236 North Carolina History 3-0-3 |
| HUM 150 American Women's Studies 3-0-3 | POL 120 American Government 3-0-3 |
| HUM 160 Introduction to Film 2-2-3 | PSY 150 General Psychology 3-0-3 |
| MUS 110 Music Appreciation 3-0-3 | PSY 237 Social Psychology 3-0-3 |
| MUS 112 Introduction to Jazz 3-0-3 | PSY 241 Developmental Psychology 3-0-3 |
| PHI 240 Introduction to Ethics 3-0-3 | PSY 246 Adolescent Psychology 3-0-3 |
| REL 110 World Religions 3-0-3 | PSY 281 Abnormal Psychology 3-0-3 |
| REL 211 Intro to Old Testament 3-0-3 | SOC 210 Introduction to Sociology 3-0-3 |
| REL 212 Intro to New Testament 3-0-3 | SOC 213 Sociology of the Family 3-0-3 |
| | SOC 220 Social Problems 3-0-3 |
| | SOC 225 Social Diversity 3-0-3 |
| | SOC 232 Social Context of Aging 3-0-3 |
| *Not applicable for some health sciences programs.* | SOC 240 Social Psychology 3-0-3 |

## Approved AAS Electives

**Approved AAS Electives (C-L-SHC)**

| APPROVED HUMANITIES/FINE ARTS ELECTIVES | APPROVED SOCIAL/BEHAVIORAL SCIENCE ELECTIVES |
|---|---|
| ART 111 Art Appreciation 3-0-3 | ANT 210 General Anthropology 3-0-3 |
| ART 114 Art History Survey I 3-0-3 | ANT 220 Cultural Anthropology 3-0-3 |
| ART 115 Art History Survey II 3-0-3 | ECO 151 Survey of Economics 3-0-3 |
| DRA 111 Theatre Appreciation 3-0-3 | ECO 251 Principles of Microeconomics 3-0-3 |
| ENG 125 Creative Writing I 3-0-3 | ECO 252 Principles of Macroeconomics 3-0-3 |
| ENG 231 American Literature I 3-0-3 | HIS 111 World Civilization I 3-0-3 |
| ENG 232 American Literature II 3-0-3 | HIS 112 World Civilization II 3-0-3 |
| *ENG 241 British Literature I 3-0-3 | HIS 131 American History I 3-0-3 |
| *ENG 242 British Literature II 3-0-3 | HIS 132 American History II 3-0-3 |
| HUM 110 Technology and Society 3-0-3 | HIS 222 African-American History I 3-0-3 |
| HUM 115 Critical Thinking 3-0-3 | HIS 223 African-American History II 3-0-3 |
| HUM 120 Cultural Studies 3-0-3 | HIS 226 The Civil War 3-0-3 |
| HUM 122 Southern Culture 3-0-3 | HIS 236 North Carolina History 3-0-3 |
| HUM 150 American Women's Studies 3-0-3 | POL 120 American Government 3-0-3 |
| HUM 160 Introduction to Film 2-2-3 | PSY 150 General Psychology 3-0-3 |
| MUS 110 Music Appreciation 3-0-3 | PSY 237 Social Psychology 3-0-3 |
| MUS 112 Introduction to Jazz 3-0-3 | PSY 241 Developmental Psychology 3-0-3 |
| PHI 240 Introduction to Ethics 3-0-3 | PSY 246 Adolescent Psychology 3-0-3 |
| REL 110 World Religions 3-0-3 | PSY 281 Abnormal Psychology 3-0-3 |
| REL 211 Intro to Old Testament 3-0-3 | SOC 210 Introduction to Sociology 3-0-3 |
| REL 212 Intro to New Testament 3-0-3 | SOC 213 Sociology of the Family 3-0-3 |
| | SOC 220 Social Problems 3-0-3 |
| | SOC 225 Social Diversity 3-0-3 |
| | SOC 232 Social Context of Aging 3-0-3 |
| *Not applicable for some health sciences programs.* | SOC 240 Social Psychology 3-0-3 |

# A5030A - Machining Technology/Tool, Die & Mold Making AAS

## Overview

**Program Code**
A5030A

**Credential**
Associate in Applied Science

# A50420 - Welding Technology AAS

## Overview

**Program Code**
A50420

**Program Description**
The Welding Technology curriculum provides students with a sound understanding of the science, technology, and applications essential for successful employment in the welding and metalworking industry.

Instruction includes consumable and non-consumable electrode welding and cutting processes. Courses may include math, print reading, metallurgy, welding inspection, and destructive and non-destructive testing providing the student with

industry-standard skills developed through classroom training and practical application.

Graduates of the Welding Technology curriculum may be employed as entry-level technicians in welding and metalworking industries. Career opportunities also exist in construction, manufacturing, fabrication, sales, quality control, supervision, and welding-related self-employment.

**Career Pathway Options**
Associate in Applied Science in Welding Technology

**Career Community**
Applied Technologies

**Program Length**
5 semesters

**Credential**
Associate in Applied Science

## Program Outcomes

## Degree Maps

Welding Technology Associate in Applied Science Degree
**Total Credits**
69 - 70

| Semester | Term | Term Credits |
|---|---|---|
| 1st Semester | Fall | 16 - 17 |

**Courses**
- ACA122 - College Transfer Success

**Term Credits** 1

**Courses**
- BPR111 - Print Reading

**Term Credits** 2

**Courses**
- ISC110 - Workplace Safety

**Term Credits** 1

**Courses**
- WLD110 - Cutting Processes

**Term Credits** 2

**Courses**
- WLD115 - SMAW (Stick) Plate

**Term Credits** 5

**Courses**
- CIS111 - Basic PC Literacy

**Term Credits** 2

**Courses**
- MAT110 - Mathematical Measurement and Literacy
  **OR**
- PHY110 - Conceptual Physics
- **AND** PHY110A - Conceptual Physics Lab
  **OR**
- PHY121 - Applied Physics I

**Term Credits** 3 - 4

| Semester | Term | Term Credits |
|---|---|---|
| 2nd Semester | Spring | 14 |

**Courses**
- WLD121 - GMAW (MIG) FCAW/Plate

**Term Credits** 4

**Courses**
- WLD131 - GTAW (TIG) Plate

**Term Credits** 4

**Courses**
- WLD141 - Symbols and Specifications

**Term Credits** 3

**Courses**
- ENG110 - Freshman Composition
  **OR**
- ENG111 - Writing and Inquiry

**Term Credits** 3

| Semester | Term | Term Credits |
|---|---|---|
| 3rd Semester | Summer | 7 |

**Courses**
- WLD116 - SMAW (stick) Plate/Pipe

**Term Credits** 4

**Courses**
- Humanities/Fine Arts Elective (Generic)

**Term Credits** 3

| Semester | Term | Term Credits |
|---|---|---|
| 4th Semester | Fall | 16 |

**Courses**
- WLD151 - Fabrication I

**Term Credits** 4

**Courses**
- WLD261 - Certification Practices

**Term Credits** 2

**Courses**
- WLD262 - Inspection & Testing

**Term Credits** 3

**Courses**
- WLD265 - Automated Welding/Cutting

**Term Credits** 4

**Courses**
- Communications Elective (Generic)

**Term Credits** 3

| Semester | Term | Term Credits |
|---|---|---|
| 5th Semester | Spring | 16 |

**Courses**
- MEC111 - Machine Processes I

**Term Credits** 3

**Courses**
- WLD132 - GTAW (TIG) Plate/Pipe

**Term Credits** 3

**Courses**
- WLD215 - SMAW (stick) Pipe

**Term Credits** 4

**Courses**
- WLD251 - Fabrication II

**Term Credits** 3

**Courses**
- Social/Behavioral Science Elective (Generic)

**Term Credits** 3

## Approved AAS Electives

**Approved AAS Electives (C-L-SHC)**

| APPROVED HUMANITIES/FINE ARTS ELECTIVES | APPROVED SOCIAL/BEHAVIORAL SCIENCE ELECTIVES |
|---|---|
| ART 111 Art Appreciation 3-0-3 | ANT 210 General Anthropology 3-0-3 |
| ART 114 Art History Survey I 3-0-3 | ANT 220 Cultural Anthropology 3-0-3 |
| ART 115 Art History Survey II 3-0-3 | ECO 151 Survey of Economics 3-0-3 |
| DRA 111 Theatre Appreciation 3-0-3 | ECO 251 Principles of Microeconomics 3-0-3 |
| ENG 125 Creative Writing I 3-0-3 | ECO 252 Principles of Macroeconomics 3-0-3 |
| ENG 231 American Literature I 3-0-3 | HIS 111 World Civilization I 3-0-3 |
| ENG 232 American Literature II 3-0-3 | HIS 112 World Civilization II 3-0-3 |
| *ENG 241 British Literature I 3-0-3 | HIS 131 American History I 3-0-3 |
| *ENG 242 British Literature II 3-0-3 | HIS 132 American History II 3-0-3 |
| HUM 110 Technology and Society 3-0-3 | HIS 222 African-American History I 3-0-3 |
| HUM 115 Critical Thinking 3-0-3 | HIS 223 African-American History II 3-0-3 |
| HUM 120 Cultural Studies 3-0-3 | HIS 226 The Civil War 3-0-3 |
| HUM 122 Southern Culture 3-0-3 | HIS 236 North Carolina History 3-0-3 |
| HUM 150 American Women's Studies 3-0-3 | POL 120 American Government 3-0-3 |
| HUM 160 Introduction to Film 2-2-3 | PSY 150 General Psychology 3-0-3 |
| MUS 110 Music Appreciation 3-0-3 | PSY 237 Social Psychology 3-0-3 |
| MUS 112 Introduction to Jazz 3-0-3 | PSY 241 Developmental Psychology 3-0-3 |
| PHI 240 Introduction to Ethics 3-0-3 | PSY 246 Adolescent Psychology 3-0-3 |
| REL 110 World Religions 3-0-3 | PSY 281 Abnormal Psychology 3-0-3 |
| REL 211 Intro to Old Testament 3-0-3 | SOC 210 Introduction to Sociology 3-0-3 |
| REL 212 Intro to New Testament 3-0-3 | SOC 213 Sociology of the Family 3-0-3 |
| | SOC 220 Social Problems 3-0-3 |
| | SOC 225 Social Diversity 3-0-3 |
| | SOC 232 Social Context of Aging 3-0-3 |
| *Not applicable for some health sciences programs.* | SOC 240 Social Psychology 3-0-3 |

# A55110 - Barbering AAS

## Overview

**Program Code**
A55110

**Program Description**
The Barbering Curriculum is designed to provide competency-based knowledge, scientific/artistic principles and hands-on fundamentals associated with the barber industry. The curriculum also provides a simulated environment that enables students to develop manipulative skills.

Course work includes instruction in all phases of professional barbering, 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 Examiners. Upon successfully passing the State Board exam, graduates will be issued a license. Employment is available in barbershops and related businesses.

**Career Pathway Options**
Associate in Applied Science in Barbering

**Career Community**
Professional Services

**Program Length**
5 semesters

**Credential**
Associate in Applied Science

## Program Outcomes

## Degree Maps

Barbering Associate in Applied Science Degree
**Total Credits**
65

| Semester | Term | Term Credits |
|---|---|---|
| 1st Semester | Fall | 13 |

**Courses**
- BAR111 - Barbering Concepts I

**Term Credits** 4

**Courses**
- BAR112 - Barbering Clinic I

**Term Credits** 8

**Courses**
- ACA122 - College Transfer Success

**Term Credits** 1

| Semester | Term | Term Credits |
|---|---|---|
| 2nd Semester | Spring | 17 |

**Courses**
- BAR113 - Barbering Concepts II

**Term Credits** 4

**Courses**
- BAR114 - Barbering Clinic II

**Term Credits** 8

**Courses**
- BAR121 - Contemporary Hair Coloring

**Term Credits** 2

**Courses**
- Social/Behavioral Science Elective (Generic)

**Term Credits** 3

| Semester | Term | Term Credits |
|---|---|---|
| 3rd Semester | Summer | 8 |

**Courses**
- BAR115 - Barbering Concepts III

**Term Credits** 4

**Courses**
- BAR116 - Barbering Clinic III

**Term Credits** 4

| Semester | Term | Term Credits |
|---|---|---|
| 4th Semester | Fall | 14 |

**Courses**
- BAR117 - Barbering Concepts IV

**Term Credits** 2

**Courses**
- BAR118 - Barbering Clinic IV

**Term Credits** 7

**Courses**
- BAR119 - Trichology and Chemistry

**Term Credits** 2

**Courses**
- ENG110 - Freshman Composition
  **OR**
- ENG111 - Writing and Inquiry

**Term Credits** 3

| Semester | Term | Term Credits |
|---|---|---|
| 5th Semester | Spring | 13 |

**Courses**
- WBL110 - World of Work

**Term Credits** 1

**Courses**
- CIS110 - Introduction to Computers

**Term Credits** 3

**Courses**
- MAT110 - Mathematical Measurement and Literacy
  **OR**
- MAT143 - Quantitative Literacy

**Term Credits** 3

**Courses**

- Humanities/Fine Arts Elective (Generic)

**Term Credits** 3

**Courses**

- Communications Elective (Generic)

**Term Credits** 3

## Approved AAS Electives

**Approved AAS Electives (C-L-SHC)**

| **APPROVED COMMUNICATION ELECTIVES** | |
|---|---|
| ENG 112 Writing/Research in the Disciplines 3-0-3<br>ENG 114 Professional Research and Reporting 3-0-3<br>COM 110 Introduction to Communication 3-0-3<br>COM 120 Intro to Interpersonal Communication 3-0-3<br>COM 231 Public Speaking 3-0-3 | |
| **APPROVED HUMANITIES/FINE ARTS ELECTIVES** | **APPROVED SOCIAL/BEHAVIORAL SCIENCE ELECTIVES** |
| ART 111 Art Appreciation 3-0-3<br>ART 114 Art History Survey I 3-0-3<br>ART 115 Art History Survey II 3-0-3<br>DRA 111 Theatre Appreciation 3-0-3<br>ENG 125 Creative Writing I 3-0-3<br>ENG 231 American Literature I 3-0-3<br>ENG 232 American Literature II 3-0-3<br>*ENG 241 British Literature I 3-0-3<br>*ENG 242 British Literature II 3-0-3<br>HUM 110 Technology and Society 3-0-3<br>HUM 115 Critical Thinking 3-0-3<br>HUM 120 Cultural Studies 3-0-3<br>HUM 122 Southern Culture 3-0-3<br>HUM 150 American Women's Studies 3-0-3<br>HUM 160 Introduction to Film 2-2-3<br>MUS 110 Music Appreciation 3-0-3<br>MUS 112 Introduction to Jazz 3-0-3<br>PHI 240 Introduction to Ethics 3-0-3<br>REL 110 World Religions 3-0-3<br>REL 211 Intro to Old Testament 3-0-3<br>REL 212 Intro to New Testament 3-0-3<br><br>**Not applicable for some health sciences programs.* | ANT 210 General Anthropology 3-0-3<br>ANT 220 Cultural Anthropology 3-0-3<br>ECO 151 Survey of Economics 3-0-3<br>ECO 251 Principles of Microeconomics 3-0-3<br>ECO 252 Principles of Macroeconomics 3-0-3<br>HIS 111 World Civilization I 3-0-3<br>HIS 112 World Civilization II 3-0-3<br>HIS 131 American History I 3-0-3<br>HIS 132 American History II 3-0-3<br>HIS 222 African-American History I 3-0-3<br>HIS 223 African-American History II 3-0-3<br>HIS 226 The Civil War 3-0-3<br>HIS 236 North Carolina History 3-0-3<br>POL 120 American Government 3-0-3<br>PSY 150 General Psychology 3-0-3<br>PSY 237 Social Psychology 3-0-3<br>PSY 241 Developmental Psychology 3-0-3<br>PSY 246 Adolescent Psychology 3-0-3<br>PSY 281 Abnormal Psychology 3-0-3<br>SOC 210 Introduction to Sociology 3-0-3<br>SOC 213 Sociology of the Family 3-0-3<br>SOC 220 Social Problems 3-0-3<br>SOC 225 Social Diversity 3-0-3<br>SOC 232 Social Context of Aging 3-0-3<br>SOC 240 Social Psychology 3-0-3 |

# A55140 - Cosmetology AAS

## Overview

**Program Code**
A55140

**Program Description**
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 will be issued a license. Employment is available in beauty salons and related businesses.

**Career Pathway Options**
Associates in Applied Science in Cosmetology

**Career Community**
Professional Services

**Program Length**
5 semesters

**Credential**
Associate in Applied Science

## Program Outcomes

## Degree Maps

Cosmetology Associate in Applied Science Degree
**Total Credits**
65

| Semester | Term | Term Credits |
|---|---|---|
| 1st Semester | Fall | 16 |

**Courses**
- COS111 - Cosmetology Concepts I

**Term Credits** 4

**Courses**
- COS112 - Salon I

**Term Credits** 8

**Courses**
- ACA122 - College Transfer Success

**Term Credits** 1

**Courses**
- Communications Requirement (Generic)

**Term Credits** 3

| Semester | Term | Term Credits |
|---|---|---|
| 2nd Semester | Spring | 17 |

**Courses**
- COS113 - Cosmetology Concepts II

**Term Credits** 4

**Courses**
- COS114 - Salon II

**Term Credits** 8

**Courses**
- COS223 - Contemporary Hair Coloring

**Term Credits** 2

**Courses**
- Social/Behavioral Science Elective (Generic)

**Term Credits** 3

| Semester | Term | Term Credits |
|---|---|---|
| 3rd Semester | Summer | 8 |

**Courses**
- COS115 - Cosmetology Concepts III

**Term Credits** 4

**Courses**
- COS116 - Salon III

**Term Credits** 4

| Semester | Term | Term Credits |
|---|---|---|
| 4th Semester | Fall | 14 |

**Courses**
- COS117 - Cosmetology Concepts IV

**Term Credits** 2

**Courses**
- COS118 - Salon IV

**Term Credits** 7

**Courses**
- COS224 - Trichology & Chemistry

**Term Credits** 2

**Courses**
- MAT110 - Mathematical Measurement and Literacy

**Term Credits** 3

| Semester | Term | Term Credits |
|---|---|---|
| 5th Semester | Spring | 10 |

**Courses**
- CIS110 - Introduction to Computers

**Term Credits** 3

**Courses**

- ENG111 - Writing and Inquiry

**Term Credits** 3

**Courses**

- WBL110 - World of Work

**Term Credits** 1

**Courses**

- Humanities and Fine Arts Elective (Generic)

**Term Credits** 3

## Approved AAS Electives

**Approved AAS Electives (C-L-SHC)**

| **APPROVED COMMUNICATION ELECTIVES** | |
|---|---|
| COM 110 Introduction to Communication 3-0-3<br>COM 120 Intro to Interpersonal Communication 3-0-3<br>COM 231 Public Speaking 3-0-3<br>ENG 112 Writing/Research in the Disciplines 3-0-3<br>ENG 114 Prof Research & Reporting 3-0-3<br>ENG-115 Oral Communications 3-0-3<br>ENG 116 Technical Report Writing 3-0-3 | |
| **APPROVED HUMANITIES/FINE ARTS ELECTIVES** | **APPROVED SOCIAL/BEHAVIORAL SCIENCE ELECTIVES** |

| | |
|---|---|
| ART 111 Art Appreciation 3-0-3 | ANT 210 General Anthropology 3-0-3 |
| ART 114 Art History Survey I 3-0-3 | ANT 220 Cultural Anthropology 3-0-3 |
| ART 115 Art History Survey II 3-0-3 | ECO 151 Survey of Economics 3-0-3 |
| DRA 111 Theatre Appreciation 3-0-3 | ECO 251 Principles of Microeconomics 3-0-3 |
| ENG 125 Creative Writing I 3-0-3 | ECO 252 Principles of Macroeconomics 3-0-3 |
| ENG 231 American Literature I 3-0-3 | HIS 111 World Civilization I 3-0-3 |
| ENG 232 American Literature II 3-0-3 | HIS 112 World Civilization II 3-0-3 |
| *ENG 241 British Literature I 3-0-3 | HIS 131 American History I 3-0-3 |
| *ENG 242 British Literature II 3-0-3 | HIS 132 American History II 3-0-3 |
| HUM 110 Technology and Society 3-0-3 | HIS 222 African-American History I 3-0-3 |
| HUM 115 Critical Thinking 3-0-3 | HIS 223 African-American History II 3-0-3 |
| HUM 120 Cultural Studies 3-0-3 | HIS 226 The Civil War 3-0-3 |
| HUM 122 Southern Culture 3-0-3 | HIS 236 North Carolina History 3-0-3 |
| HUM 150 American Women's Studies 3-0-3 | POL 120 American Government 3-0-3 |
| HUM 160 Introduction to Film 2-2-3 | PSY 150 General Psychology 3-0-3 |
| MUS 110 Music Appreciation 3-0-3 | PSY 237 Social Psychology 3-0-3 |
| MUS 112 Introduction to Jazz 3-0-3 | PSY 241 Developmental Psychology 3-0-3 |
| PHI 240 Introduction to Ethics 3-0-3 | PSY 246 Adolescent Psychology 3-0-3 |
| REL 110 World Religions 3-0-3 | PSY 281 Abnormal Psychology 3-0-3 |
| REL 211 Intro to Old Testament 3-0-3 | SOC 210 Introduction to Sociology 3-0-3 |
| REL 212 Intro to New Testament 3-0-3 | SOC 213 Sociology of the Family 3-0-3 |
| | SOC 220 Social Problems 3-0-3 |
| *Not applicable for some health sciences programs.* | SOC 225 Social Diversity 3-0-3 |
| | SOC 232 Social Context of Aging 3-0-3 |
| | SOC 240 Social Psychology 3-0-3 |

# A55150 - Culinary Arts AAS

## Overview

**Program Code**
A55150

**Program Description**
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 health care facilities.

Students will be provided theoretical knowledge/practical applications that provide critical competencies to meet 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.

**Career Pathway Options**
Associate in Applied Science Degree in Culinary Arts

**Career Community**
Professional Services

**Program Length**
4 semesters

**Credential**
Associate in Applied Science

## Program Outcomes

## Degree Maps

Culinary Arts Associate in Applied Science
**Total Credits**
65

| Semester | Term | Term Credits |
|---|---|---|
| 1st Semester | Fall | 16 |

**Courses**
- ACA122 - College Transfer Success

**Term Credits** 1

**Courses**
- CUL110 - Sanitation and Safety

**Term Credits** 2

**Courses**
- CUL140 - Culinary Skills I

**Term Credits** 5

**Courses**
- CUL240 - Culinary Skills II

**Term Credits** 5

**Courses**
- NUT110 - Nutrition

**Term Credits** 3

| Semester | Term | Term Credits |
|---|---|---|
| 2nd Semester | Spring | 15 |

**Courses**
- CUL112 - Nutrition for Foodservice

**Term Credits** 3

**Courses**
- CUL112A - Nutrition for Foodservice Lab

**Term Credits** 1

**Courses**
- CUL120 - Purchasing

**Term Credits** 2

**Courses**
- CUL170 - Garde Manger I

**Term Credits** 3

**Courses**
- ENG111 - Writing and Inquiry

**Term Credits** 3

**Courses**
- Humanities/Fine Arts Elective (Generic)

**Term Credits** 3

| Semester | Term | Term Credits |
|---|---|---|
| 3rd Semester | Fall | 18 |

**Courses**
- CIS110 - Introduction to Computers

**Term Credits** 3

**Courses**
- CUL135 - Food and Beverage Service

**Term Credits** 2

**Courses**
- CUL160 - Baking I

**Term Credits** 3

**Courses**
- ENG114 - Professional Research & Reporting

**Term Credits** 3

**Courses**
- MAT110 - Mathematical Measurement and Literacy

**Term Credits** 3

**Courses**
- WBL111 - Work-Based Learning I

**Term Credits** 1

**Courses**
- Social/Behavioral Science Elective (Generic)

**Term Credits** 3

| Semester | Term | Term Credits |
|---|---|---|
| 4th Semester | Spring | 16 |

**Courses**
- CUL165 - Therapeutic Cuisine

**Term Credits** 3

**Courses**
- HRM245 - Human Resource Management-Hospitality

**Term Credits** 3

**Courses**
- WBL121 - Work-Based Learning II

**Term Credits** 1

**Courses**
- CUL275 - Catering Cuisine

**OR**
- CUL283 - Farm-To-Table

**Term Credits** 5

**Courses**
- Elective (Generic)

**Term Credits** 4

## Approved AAS Electives

| MAJOR ELECTIVES (TAKE 4 CREDITS) | |
|---|---|
| Select from: ACC-115, BUS 110, BUS 137, BUS 230, CUL 140A, CUL 240A, CUL 260, CUL 270, CUL 275, CUL 283 | |
| **APPROVED HUMANITIES/FINE ARTS ELECTIVES** | **APPROVED SOCIAL/ BEHAVIORAL SCIENCE ELECTIVES** |

| | |
|---|---|
| ART 111 Art Appreciation 3-0-3<br>ART 114 Art History Survey I 3-0-3<br>ART 115 Art History Survey II 3-0-3<br>DRA 111 Theatre Appreciation 3-0-3<br>ENG 125 Creative Writing I 3-0-3<br>ENG 231 American Literature I 3-0-3<br>ENG 232 American Literature II 3-0-3<br>*ENG 241 British Literature I 3-0-3<br>*ENG 242 British Literature II 3-0-3<br>HUM 110 Technology and Society 3-0-3<br>HUM 115 Critical Thinking 3-0-3<br>HUM 120 Cultural Studies 3-0-3<br>HUM 122 Southern Culture 3-0-3<br>HUM 150 American Women's Studies 3-0-3<br>HUM 160 Introduction to Film 2-2-3<br>MUS 110 Music Appreciation 3-0-3<br>MUS 112 Introduction to Jazz 3-0-3<br>PHI 240 Introduction to Ethics 3-0-3<br>REL 110 World Religions 3-0-3<br>REL 211 Intro to Old Testament 3-0-3<br>REL 212 Intro to New Testament 3-0-3<br><br>**Not applicable for some health sciences programs.* | ANT 210 General Anthropology 3-0-3<br>ANT 220 Cultural Anthropology 3-0-3<br>ECO 151 Survey of Economics 3-0-3<br>ECO 251 Principles of Microeconomics 3-0-3<br>ECO 252 Principles of Macroeconomics 3-0-3<br>HIS 111 World Civilization I 3-0-3<br>HIS 112 World Civilization II 3-0-3<br>HIS 131 American History I 3-0-3<br>HIS 132 American History II 3-0-3<br>HIS 222 African-American History I 3-0-3<br>HIS 223 African-American History II 3-0-3<br>HIS 226 The Civil War 3-0-3<br>HIS 236 North Carolina History 3-0-3<br>POL 120 American Government 3-0-3<br>PSY 150 General Psychology 3-0-3<br>PSY 237 Social Psychology 3-0-3<br>PSY 241 Developmental Psychology 3-0-3<br>PSY 246 Adolescent Psychology 3-0-3<br>PSY 281 Abnormal Psychology 3-0-3<br>SOC 210 Introduction to Sociology 3-0-3<br>SOC 213 Sociology of the Family 3-0-3<br>SOC 220 Social Problems 3-0-3<br>SOC 225 Social Diversity 3-0-3<br>SOC 232 Social Context of Aging 3-0-3<br>SOC 240 Social Psychology 3-0-3 |

# A55180 - Criminal Justice Technology AAS

## Overview

**Program Code**
A55180

**Program Description**
The Criminal Justice Technology curriculum is designed to provide knowledge of criminal justice systems and operations. Study will focus on local, state, and federal law enforcement, judicial processes, corrections, and security services. The criminal justice system?s role within society will be 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. Examples include police officer, deputy sheriff, county detention officer, state trooper, intensive probation/parole surveillance officer, correctional officer, and loss prevention specialist.

**Career Pathway Options**
Associate in Applied Science in Criminal Justice Technology

**Career Community**
Public Safety

**Program Length**
5 semesters

**Credential**
Associate in Applied Science

## Program Outcomes

## Degree Maps

Criminal Justice Technology Associate in Applied Science Degree
**Total Credits**
64

| Semester | Term | Term Credits |
|---|---|---|
| 1st Semester | Fall | 13 |

**Courses**
- ACA122 - College Transfer Success

**Term Credits** 1

**Courses**
- CJC111 - Introduction to Criminal Justice

**Term Credits** 3

**Courses**
- CJC231 - Constitutional Law

**Term Credits** 3

**Courses**
- Social/Behavioral Science Requirement (Generic)

**Term Credits** 3

**Courses**
- Major Elective (Generic)

**Term Credits** 3

| Semester | Term | Term Credits |
|---|---|---|
| 2nd Semester | Spring | 18 |

**Courses**
- CJC131 - Criminal Law

**Term Credits** 3

**Courses**
- CJC221 - Investigative Principles

**Term Credits** 4

**Courses**
- ENG111 - Writing and Inquiry

**Term Credits** 3

**Courses**
- Major Elective (Generic)

**Term Credits** 8

| Semester | Term | Term Credits |
|---|---|---|
| 3rd Semester | Summer | 6 |

**Courses**
- CJC112 - Criminology

**Term Credits** 3

**Courses**
- CJC113 - Juvenile Justice

**Term Credits** 3

| Semester | Term | Term Credits |
|---|---|---|
| 4th Semester | Fall | 12 |

**Courses**
- CIS110 - Introduction to Computers

**Term Credits** 3

**Courses**
- Communications Requirement (Generic)

**Term Credits** 3

**Courses**
- Humanities/Fine Arts Requirement (Generic)

**Term Credits** 3

**Courses**
- Major Electives (Generic)

**Term Credits** 3

| Semester | Term | Term Credits |
|---|---|---|
| 5th Semester | Spring | 15 |

**Courses**

- CJC212 - Ethics & Community Relations

**Term Credits** 3

**Courses**

- Mathematics Requirement (Generic)

**Term Credits** 3

**Courses**

- Major Electives (Generic)

**Term Credits** 9

## Approved AAS Electives

**Approved AAS Electives (C-L-SHC)**

| APPROVED HUMANITIES/FINE ARTS ELECTIVES | APPROVED SOCIAL/BEHAVIORAL SCIENCE ELECTIVES |
|---|---|
| ART 111 Art Appreciation 3-0-3 | ANT 210 General Anthropology 3-0-3 |
| ART 114 Art History Survey I 3-0-3 | ANT 220 Cultural Anthropology 3-0-3 |
| ART 115 Art History Survey II 3-0-3 | ECO 151 Survey of Economics 3-0-3 |
| DRA 111 Theatre Appreciation 3-0-3 | ECO 251 Principles of Microeconomics 3-0-3 |
| ENG 125 Creative Writing I 3-0-3 | ECO 252 Principles of Macroeconomics 3-0-3 |
| ENG 231 American Literature I 3-0-3 | HIS 111 World Civilization I 3-0-3 |
| ENG 232 American Literature II 3-0-3 | HIS 112 World Civilization II 3-0-3 |
| *ENG 241 British Literature I 3-0-3 | HIS 131 American History I 3-0-3 |
| *ENG 242 British Literature II 3-0-3 | HIS 132 American History II 3-0-3 |
| HUM 110 Technology and Society 3-0-3 | HIS 222 African-American History I 3-0-3 |
| HUM 115 Critical Thinking 3-0-3 | HIS 223 African-American History II 3-0-3 |
| HUM 120 Cultural Studies 3-0-3 | HIS 226 The Civil War 3-0-3 |
| HUM 122 Southern Culture 3-0-3 | HIS 236 North Carolina History 3-0-3 |
| HUM 150 American Women's Studies 3-0-3 | POL 120 American Government 3-0-3 |
| HUM 160 Introduction to Film 2-2-3 | PSY 150 General Psychology 3-0-3 |
| MUS 110 Music Appreciation 3-0-3 | PSY 237 Social Psychology 3-0-3 |
| MUS 112 Introduction to Jazz 3-0-3 | PSY 241 Developmental Psychology 3-0-3 |
| PHI 240 Introduction to Ethics 3-0-3 | PSY 246 Adolescent Psychology 3-0-3 |
| REL 110 World Religions 3-0-3 | PSY 281 Abnormal Psychology 3-0-3 |
| REL 211 Intro to Old Testament 3-0-3 | SOC 210 Introduction to Sociology 3-0-3 |
| REL 212 Intro to New Testament 3-0-3 | SOC 213 Sociology of the Family 3-0-3 |
| | SOC 220 Social Problems 3-0-3 |
| | SOC 225 Social Diversity 3-0-3 |
| | SOC 232 Social Context of Aging 3-0-3 |
| *Not applicable for some health sciences programs.* | SOC 240 Social Psychology 3-0-3 |

## Major Elective Course List for Criminal Justice

**Major Elective Course List for Criminal Justice**

Select from these:

BUS 137 Principles of Management 3-0-3
BUS 153 Human Resource Management 3-0-3
CJC 120 Interviews/Interrogations 1-2-2
CJC 121 Law Enforcement Operations 3-0-3
CJC 122 Community Policing 3-0-3
CJC 132 Court Procedure and Evidence 3-0-3
CJC 141 Corrections 3-0-3
CJC 151 Intro to Loss Prevention 3-0-3
CJC 160 Terrorism: Underlying Issues 3-0-3
CJC 213 Substance Abuse 3-0-3

CJC 214 Victimology 3-0-3
CJC 215 Organization and Administration 3-0-3
CJC 225 Crisis Intervention 3-0-3
CJC 232 Civil Liability 3-0-3
HSE 110 Introduction to Human Services 2-2-3
POL 130 State & Local Government 3-0-3
PSY 281 Abnormal Psychology 3-0-3
PSY 237 Social Psychology 3-0-3
PSY 246 Adolescent Psychology 3-0-3
SOC 220 Social Problems 3-0-3
SOC 225 Social Diversity 3-0-3

# A5518C - Criminal Justice Technology Forensic Science AAS

## Overview

**Program Code**
A5518C

**Program Description**
Forensic Science is a concentration under the curriculum of Criminal Justice Technology, which focuses on the application of the physical, biomedical, and social sciences to the analysis and evaluation of physical evidence, human testimony and criminal suspects. Study will focus on local, state, and federal law enforcement, evidence processing and procedures.

Students will learn both theory and hands-on analysis of latent evidence. They will learn fingerprint classification, identification, and chemical development. Students will record, cast, and recognize footwear and tire-tracks; and process crime scenes. Issues and concepts of communications and the use of computers and computer assisted design programs in crime scene technology will be discussed.

Graduates should qualify for employment in a variety of criminal justice organizations especially in local, state, and federal law enforcement, and correctional agencies.

**Career Pathway Options**
Associate in Applied Science in Criminal Justice Technology - Forensic Science

**Career Community**
Public Safety

**Program Length**
5 semesters

**Credential**
Associate in Applied Science

## Program Outcomes

## Degree Maps

Criminal Justice Technology Forensic Science
**Total Credits**
58

| Semester | Term | Term Credits |
|---|---|---|
| 1st Semester | Fall | 16 |

**Courses**
- ACA122 - College Transfer Success

**Term Credits** 1

**Courses**
- CJC111 - Introduction to Criminal Justice

**Term Credits** 3

**Courses**
- CJC115 - Crime Scene Photography

**Term Credits** 3

**Courses**
- CJC231 - Constitutional Law

**Term Credits** 3

**Courses**
- CJC245 - Friction Ridge Analysis

**Term Credits** 3

**Courses**
- MAT143 - Quantitative Literacy

**Term Credits** 3

| Semester | Term | Term Credits |
|---|---|---|
| 2nd Semester | Spring | 15 |

**Courses**
- CJC120 - Interviews/Interrogations

**Term Credits** 2

**Courses**
- CJC146 - Trace Evidence

**Term Credits** 3

**Courses**
- CJC221 - Investigative Principles

**Term Credits** 4

**Courses**
- CJC246 - Advanced Friction Ridge Analysis

**Term Credits** 3

**Courses**
- ENG111 - Writing and Inquiry

**Term Credits** 3

| Semester | Term | Term Credits |
|---|---|---|
| 3rd Semester | Summer | 6 |

**Courses**
- CJC112 - Criminology

**Term Credits** 3

**Courses**
- CJC113 - Juvenile Justice

**Term Credits** 3

| Semester | Term | Term Credits |
|---|---|---|
| 4th Semester | Summer | 12 |

**Courses**
- CIS110 - Introduction to Computers

**Term Credits** 3

**Courses**
- CJC131 - Criminal Law

**Term Credits** 3

**Courses**
- CJC144 - Crime Scene Processing

**Term Credits** 3

**Courses**
- CJC222 - Criminalistics

**Term Credits** 3

**Courses**
- Humanities/Fine Arts Elective (Generic)

**Term Credits** -

| Semester | Term | Term Credits |
|---|---|---|
| 5th Semester | Spring | 9 |

**Courses**
- CJC121 - Law Enforcement Operations

**Term Credits** 3

**Courses**
- CJC212 - Ethics & Community Relations

**Term Credits** 3

**Courses**
- CJC232 - Civil Liability

**Term Credits** 3

**Courses**
- Communications, select one: ENG 112, ENG 114, ENG 115, ENG 116, COM 110, COM 120, COM 231 (Generic)

**Term Credits** -

**Courses**
- Social/Behavioral Science Elective (Generic)

**Term Credits** -

## Approved AAS Electives

**Approved AAS Electives (C-L-SHC)**

| APPROVED HUMANITIES/FINE ARTS ELECTIVES | APPROVED SOCIAL/BEHAVIORAL SCIENCE ELECTIVES |
|---|---|
| ART 111 Art Appreciation 3-0-3 | ANT 210 General Anthropology 3-0-3 |
| ART 114 Art History Survey I 3-0-3 | ANT 220 Cultural Anthropology 3-0-3 |
| ART 115 Art History Survey II 3-0-3 | ECO 151 Survey of Economics 3-0-3 |
| DRA 111 Theatre Appreciation 3-0-3 | ECO 251 Principles of Microeconomics 3-0-3 |
| ENG 125 Creative Writing I 3-0-3 | ECO 252 Principles of Macroeconomics 3-0-3 |
| ENG 231 American Literature I 3-0-3 | HIS 111 World Civilization I 3-0-3 |
| ENG 232 American Literature II 3-0-3 | HIS 112 World Civilization II 3-0-3 |
| *ENG 241 British Literature I 3-0-3 | HIS 131 American History I 3-0-3 |
| *ENG 242 British Literature II 3-0-3 | HIS 132 American History II 3-0-3 |
| HUM 110 Technology and Society 3-0-3 | HIS 222 African-American History I 3-0-3 |
| HUM 115 Critical Thinking 3-0-3 | HIS 223 African-American History II 3-0-3 |
| HUM 120 Cultural Studies 3-0-3 | HIS 226 The Civil War 3-0-3 |
| HUM 122 Southern Culture 3-0-3 | HIS 236 North Carolina History 3-0-3 |
| HUM 150 American Women's Studies 3-0-3 | POL 120 American Government 3-0-3 |
| HUM 160 Introduction to Film 2-2-3 | PSY 150 General Psychology 3-0-3 |
| MUS 110 Music Appreciation 3-0-3 | PSY 237 Social Psychology 3-0-3 |
| MUS 112 Introduction to Jazz 3-0-3 | PSY 241 Developmental Psychology 3-0-3 |
| PHI 240 Introduction to Ethics 3-0-3 | PSY 246 Adolescent Psychology 3-0-3 |
| REL 110 World Religions 3-0-3 | PSY 281 Abnormal Psychology 3-0-3 |
| REL 211 Intro to Old Testament 3-0-3 | SOC 210 Introduction to Sociology 3-0-3 |
| REL 212 Intro to New Testament 3-0-3 | SOC 213 Sociology of the Family 3-0-3 |
| | SOC 220 Social Problems 3-0-3 |
| | SOC 225 Social Diversity 3-0-3 |
| | SOC 232 Social Context of Aging 3-0-3 |
| *Not applicable for some health sciences programs.* | SOC 240 Social Psychology 3-0-3 |

# A55220C - Early Childhood Education (Career Track) AAS

## Overview

**Program Code**
A55220C

**Career Pathway Options**
Associate in Applied Science Degree in Early Childhood Education

**Career Community**
Professional Services

**Program Length**
5 semesters

**Credential**
Associate in Applied Science

## Program Outcomes

## Degree Maps

Early Childhood Education/Career Track, Associate in Applied Science Degree
**Total Credits**
65 - 66

| Semester | Term | Term Credits |
|---|---|---|
| 1st Semester | Fall | 14 |

**Courses**
- ACA122 - College Transfer Success

**Term Credits** 1

**Courses**
- EDU119 - Introduction to Early Childhood Education

**Term Credits** 4

**Courses**
- EDU131 - Child, Family, and Community

**Term Credits** 3

**Courses**
- EDU144 - Child Development I

**Term Credits** 3

**Courses**
- ENG111 - Writing and Inquiry

**Term Credits** 3

| Semester | Term | Term Credits |
|---|---|---|
| 2nd Semester | Spring | 15 |

**Courses**
- EDU145 - Child Development II

**Term Credits** 3

**Courses**
- EDU146 - Child Guidance

**Term Credits** 3

**Courses**
- EDU151 - Creative Activities

**Term Credits** 3

**Courses**
- EDU153 - Health, Safety and Nutrition

**Term Credits** 3

**Courses**
- Communications Elective (Generic)

**Term Credits** 3

| Semester | Term | Term Credits |
|---|---|---|
| 3rd Semester | Summer | 6 |

**Courses**
- EDU221 - Children With Exceptionalities

**Term Credits** 3

**Courses**
- Humanities Elective (Generic)

**Term Credits** 3

| Semester | Term | Term Credits |
|---|---|---|
| 4th Semester | Fall | 15 - 16 |

**Courses**
- EDU234 - Infants, Toddlers, and Twos

**Term Credits** 3

**Courses**
- EDU252 - Math and Science Activities

**Term Credits** 3

**Courses**
- EDU271 - Educational Technology

**Term Credits** 3

**Courses**
- Social/Behavioral Science Elective (Generic)

**Term Credits** 3

**Courses**
- Mathematics Requirement (Generic)

**Term Credits** 3 - 4

| Semester | Term | Term Credits |
|---|---|---|
| 5th Semester | Spring | 15 |

**Courses**
- EDU259 - Curriculum Planning

**Term Credits** 3

**Courses**
- EDU280 - Language and Literacy Experiences

**Term Credits** 3

**Courses**

- EDU284 - Early Childhood Capstone Practicum

**Term Credits** 4

**Courses**

- Early Childhood Electives (take 2 courses) (Generic)

**Term Credits** 5

## Approved AAS Electives

**Approved AAS Electives (C-L-SHC)**

| **EDUCATION ELECTIVES (SELECT TWO)** | |
|---|---|
| EDU 158, EDU 163, EDU 175, EDU 177, EDU 179, EDU 216, EDU 235, EDU 261, EDU 262, EDU 263, EDU 281 | |
| **APPROVED COMMUNICATION ELECTIVES** | **APPROVED MATHEMATICS/ NATURAL SCIENCE ELECTIVE (SELECT ONE)** |
| ENG 112 Writing/Research in the Disc 3-0-3<br>ENG 114 Prof Research & Reporting 3-0-3<br>ENG 115 Oral Communication 3-0-3<br>ENG 116 Technical Report Writing 3-0-3<br>COM 110 Introduction to Communication 3-0-3<br>COM 120 Intro to Interpersonal Communication 3-0-3<br>COM 231 Public Speaking 3-0-3 | MAT 110 Math Measurement & Literacy 2-2-3<br>MAT 143 Quantitative Literacy 2-2-3<br>PHY 121 Applied Physics I 3-2-4<br>BIO-110 Principles of Biology 3-3-4<br>BIO-111 General Biology I 3-3-4<br>CHM-151 General Chemistry I 3-3-4<br>GEL-111 Geology 3-2-4<br>AST-111 Descriptive Astronomy 3-0-3<br>&<br>AST-111A Descriptive Astronomy Lab 0-2-1<br>AST-151 General Astronomy I 3-0-3<br>&<br>AST-151A General Astronomy I Lab 0-2-1<br>PHY-110 Conceptual Physics 3-0-3<br>&<br>PHY-110A Conceptual Physics Lab 0-2-1 |
| **APPROVED HUMANITIES/FINE ARTS ELECTIVES** | **APPROVED SOCIAL/ BEHAVIORAL SCIENCE ELECTIVES** |

| | |
|---|---|
| | ANT 210 General Anthropology 3-0-3 |
| | ANT 220 Cultural Anthropology 3-0-3 |
| | ECO 151 Survey of Economics 3-0-3 |
| | ECO 251 Principles of Microeconomics 3-0-3 |
| | ECO 252 Principles of Macroeconomics 3-0-3 |
| ART 111 Art Appreciation 3-0-3 | HIS 111 World Civilization I 3-0-3 |
| ART 114 Art History Survey I 3-0-3 | HIS 112 World Civilization II 3-0-3 |
| ART 115 Art History Survey II 3-0-3 | HIS 131 American History I 3-0-3 |
| DRA 111 Theatre Appreciation 3-0-3 | HIS 132 American History II 3-0-3 |
| ENG 125 Creative Writing I 3-0-3 | HIS 222 African-American History I 3-0-3 |
| ENG 231 American Literature I 3-0-3 | HIS 223 African-American History II 3-0-3 |
| ENG 232 American Literature II 3-0-3 | HIS 226 The Civil War 3-0-3 |
| *ENG 241 British Literature I 3-0-3 | HIS 236 North Carolina History 3-0-3 |
| *ENG 242 British Literature II 3-0-3 | POL 120 American Government 3-0-3 |
| HUM 110 Technology and Society 3-0-3 | PSY 150 General Psychology 3-0-3 |
| HUM 115 Critical Thinking 3-0-3 | PSY 237 Social Psychology 3-0-3 |
| HUM 120 Cultural Studies 3-0-3 | PSY 241 Developmental Psychology 3-0-3 |
| HUM 122 Southern Culture 3-0-3 | PSY 246 Adolescent Psychology 3-0-3 |
| HUM 150 American Women's Studies 3-0-3 | PSY 281 Abnormal Psychology 3-0-3 |
| HUM 160 Introduction to Film 2-2-3 | SOC 210 Introduction to Sociology 3-0-3 |
| MUS 110 Music Appreciation 3-0-3 | SOC 213 Sociology of the Family 3-0-3 |
| MUS 112 Introduction to Jazz 3-0-3 | SOC 220 Social Problems 3-0-3 |
| PHI 240 Introduction to Ethics 3-0-3 | SOC 225 Social Diversity 3-0-3 |
| REL 110 World Religions 3-0-3 | SOC 232 Social Context of Aging 3-0-3 |
| REL 211 Intro to Old Testament 3-0-3 | SOC 240 Social Psychology 3-0-3 |
| REL 212 Intro to New Testament 3-0-3 | |
| **Not applicable for some health sciences programs.* | |

# A55220L - Early Childhood Education Licensure AAS

## Overview

**Program Code**
A55220L

**Career Pathway Options**
Associate in Applied Science Degree in Early Childhood Education

**Career Community**
Professional Services

**Program Length**
5 semesters

**Credential**
Associate in Applied Science

## Program Outcomes

## Degree Maps

Early Childhood Education-Licensure, Associate in Applied Science Degree

**Total Credits**
71

| Semester | Term | Term Credits |
|---|---|---|
| 1st Semester | Fall | 14 |

**Courses**
- ACA122 - College Transfer Success

**Term Credits** 1

**Courses**
- EDU119 - Introduction to Early Childhood Education

**Term Credits** 4

**Courses**
- EDU131 - Child, Family, and Community

**Term Credits** 3

**Courses**
- EDU144 - Child Development I

**Term Credits** 3

**Courses**
- ENG111 - Writing and Inquiry

**Term Credits** 3

| Semester | Term | Term Credits |
|---|---|---|
| 2nd Semester | Spring | 18 |

**Courses**
- COM231 - Public Speaking

**Term Credits** 3

**Courses**
- EDU145 - Child Development II

**Term Credits** 3

**Courses**
- EDU146 - Child Guidance

**Term Credits** 3

**Courses**
- EDU151 - Creative Activities

**Term Credits** 3

**Courses**
- EDU153 - Health, Safety and Nutrition

**Term Credits** 3

**Courses**
- EDU280 - Language and Literacy Experiences

**Term Credits** 3

| Semester | Term | Term Credits |
|---|---|---|
| 3rd Semester | Summer | 6 |

**Courses**
- EDU221 - Children With Exceptionalities

**Term Credits** 3

**Courses**
- Humanities/Fine Arts Elective (Generic)

**Term Credits** 3

| Semester | Term | Term Credits |
|---|---|---|
| 4th Semester | Fall | 16 |

**Courses**
- EDU234 - Infants, Toddlers, and Twos

**Term Credits** 3

**Courses**
- MAT143 - Quantitative Literacy

**Term Credits** 3

**Courses**
- PSY150 - General Psychology

**Term Credits** 3

**Courses**
- Natural Science (Generic)

**Term Credits** 4

**Courses**
- English (Generic)

**Term Credits** 3

| Semester | Term | Term Credits |
|---|---|---|
| 5th Semester | Spring | 17 |

**Courses**
- EDU216 - Foundations of Education

**Term Credits** 3

**Courses**
- EDU250 - Teacher Licensure Preparation

**Term Credits** 3

**Courses**
- EDU284 - Early Childhood Capstone Practicum

**Term Credits** 4

**Courses**
- Social Science Elective (Generic)

**Term Credits** 3

**Courses**
- Natural Science (Generic)

**Term Credits** 4

## Approved AAS Electives

**Approved AAS Electives (C-L-SHC)**

| APPROVED HUMANITIES/FINE ARTS ELECTIVES | APPROVED SOCIAL/BEHAVIORAL SCIENCE ELECTIVES |
|---|---|
| ART 111 Art Appreciation 3-0-3 | ANT 210 General Anthropology 3-0-3 |
| ART 114 Art History Survey I 3-0-3 | ANT 220 Cultural Anthropology 3-0-3 |
| ART 115 Art History Survey II 3-0-3 | ECO 151 Survey of Economics 3-0-3 |
| DRA 111 Theatre Appreciation 3-0-3 | ECO 251 Principles of Microeconomics 3-0-3 |
| ENG 125 Creative Writing I 3-0-3 | ECO 252 Principles of Macroeconomics 3-0-3 |
| ENG 231 American Literature I 3-0-3 | HIS 111 World Civilization I 3-0-3 |
| ENG 232 American Literature II 3-0-3 | HIS 112 World Civilization II 3-0-3 |
| *ENG 241 British Literature I 3-0-3 | HIS 131 American History I 3-0-3 |
| *ENG 242 British Literature II 3-0-3 | HIS 132 American History II 3-0-3 |
| HUM 110 Technology and Society 3-0-3 | HIS 222 African-American History I 3-0-3 |
| HUM 115 Critical Thinking 3-0-3 | HIS 223 African-American History II 3-0-3 |
| HUM 120 Cultural Studies 3-0-3 | HIS 226 The Civil War 3-0-3 |
| HUM 122 Southern Culture 3-0-3 | HIS 236 North Carolina History 3-0-3 |
| HUM 150 American Women's Studies 3-0-3 | POL 120 American Government 3-0-3 |
| HUM 160 Introduction to Film 2-2-3 | PSY 150 General Psychology 3-0-3 |
| MUS 110 Music Appreciation 3-0-3 | PSY 237 Social Psychology 3-0-3 |
| MUS 112 Introduction to Jazz 3-0-3 | PSY 241 Developmental Psychology 3-0-3 |
| PHI 240 Introduction to Ethics 3-0-3 | PSY 246 Adolescent Psychology 3-0-3 |
| REL 110 World Religions 3-0-3 | PSY 281 Abnormal Psychology 3-0-3 |
| REL 211 Intro to Old Testament 3-0-3 | SOC 210 Introduction to Sociology 3-0-3 |
| REL 212 Intro to New Testament 3-0-3 | SOC 213 Sociology of the Family 3-0-3 |
| | SOC 220 Social Problems 3-0-3 |
| | SOC 225 Social Diversity 3-0-3 |
| | SOC 232 Social Context of Aging 3-0-3 |
| *Not applicable for some health sciences programs.* | SOC 240 Social Psychology 3-0-3 |

# A55220NL - Early Childhood Education Non-Licensure AAS

## Overview

**Program Code**
A55220NL

**Career Pathway Options**
Associate in Applied Science Degree in Early Childhood Education

**Career Community**
Professional Services

**Program Length**
5 semesters

**Credential**
Associate in Applied Science

## Program Outcomes

## Degree Maps

Early Childhood Education/Non-Licensure Associate in Applied Science Degree

**Total Credits**
71

| Semester | Term | Term Credits |
|---|---|---|
| 1st Semester | Fall | 14 |

**Courses**
- ACA122 - College Transfer Success

**Term Credits** 1

**Courses**
- EDU119 - Introduction to Early Childhood Education

**Term Credits** 4

**Courses**
- EDU131 - Child, Family, and Community

**Term Credits** 3

**Courses**
- EDU144 - Child Development I

**Term Credits** 3

**Courses**
- ENG111 - Writing and Inquiry

**Term Credits** 3

| Semester | Term | Term Credits |
|---|---|---|
| 2nd Semester | Spring | 18 |

**Courses**
- COM231 - Public Speaking

**Term Credits** 3

**Courses**
- EDU145 - Child Development II

**Term Credits** 3

**Courses**
- EDU146 - Child Guidance

**Term Credits** 3

**Courses**
- EDU151 - Creative Activities

**Term Credits** 3

**Courses**
- EDU153 - Health, Safety and Nutrition

**Term Credits** 3

**Courses**
- EDU280 - Language and Literacy Experiences

**Term Credits** 3

| Semester | Term | Term Credits |
|---|---|---|
| 3rd Semester | Summer | 6 |

**Courses**
- EDU221 - Children With Exceptionalities

**Term Credits** 3

**Courses**
- Humanities Elective (Generic)

**Term Credits** 3

| Semester | Term | Term Credits |
|---|---|---|
| 4th Semester | Fall | 16 |

**Courses**
- EDU234 - Infants, Toddlers, and Twos

**Term Credits** 3

**Courses**
- MAT143 - Quantitative Literacy

**Term Credits** 3

**Courses**
- PSY150 - General Psychology

**Term Credits** 3

**Courses**
- Natural Science (Generic)

**Term Credits** 4

**Courses**
- English (Generic)

**Term Credits** 3

| Semester | Term | Term Credits |
|---|---|---|
| 5th Semester | Spring | 17 |

**Courses**
- EDU261 - Early Childhood Administration I

**Term Credits** 3

**Courses**
- EDU262 - Early Childhood Administration II

**Term Credits** 3

**Courses**
- EDU284 - Early Childhood Capstone Practicum

**Term Credits** 4

**Courses**
- Social Science Elective (Generic)

**Term Credits** 3

**Courses**
- Natural Science (Generic)

**Term Credits** 4

## Approved AAS Electives

**Approved AAS Electives (C-L-SHC)**

| APPROVED HUMANITIES/FINE ARTS ELECTIVES | APPROVED SOCIAL/BEHAVIORAL SCIENCE ELECTIVES |
|---|---|
| ART 111 Art Appreciation 3-0-3 | ANT 210 General Anthropology 3-0-3 |
| ART 114 Art History Survey I 3-0-3 | ANT 220 Cultural Anthropology 3-0-3 |
| ART 115 Art History Survey II 3-0-3 | ECO 151 Survey of Economics 3-0-3 |
| DRA 111 Theatre Appreciation 3-0-3 | ECO 251 Principles of Microeconomics 3-0-3 |
| ENG 125 Creative Writing I 3-0-3 | ECO 252 Principles of Macroeconomics 3-0-3 |
| ENG 231 American Literature I 3-0-3 | HIS 111 World Civilization I 3-0-3 |
| ENG 232 American Literature II 3-0-3 | HIS 112 World Civilization II 3-0-3 |
| *ENG 241 British Literature I 3-0-3 | HIS 131 American History I 3-0-3 |
| *ENG 242 British Literature II 3-0-3 | HIS 132 American History II 3-0-3 |
| HUM 110 Technology and Society 3-0-3 | HIS 222 African-American History I 3-0-3 |
| HUM 115 Critical Thinking 3-0-3 | HIS 223 African-American History II 3-0-3 |
| HUM 120 Cultural Studies 3-0-3 | HIS 226 The Civil War 3-0-3 |
| HUM 122 Southern Culture 3-0-3 | HIS 236 North Carolina History 3-0-3 |
| HUM 150 American Women's Studies 3-0-3 | POL 120 American Government 3-0-3 |
| HUM 160 Introduction to Film 2-2-3 | PSY 150 General Psychology 3-0-3 |
| MUS 110 Music Appreciation 3-0-3 | PSY 237 Social Psychology 3-0-3 |
| MUS 112 Introduction to Jazz 3-0-3 | PSY 241 Developmental Psychology 3-0-3 |
| PHI 240 Introduction to Ethics 3-0-3 | PSY 246 Adolescent Psychology 3-0-3 |
| REL 110 World Religions 3-0-3 | PSY 281 Abnormal Psychology 3-0-3 |
| REL 211 Intro to Old Testament 3-0-3 | SOC 210 Introduction to Sociology 3-0-3 |
| REL 212 Intro to New Testament 3-0-3 | SOC 213 Sociology of the Family 3-0-3 |
| | SOC 220 Social Problems 3-0-3 |
| | SOC 225 Social Diversity 3-0-3 |
| | SOC 232 Social Context of Aging 3-0-3 |
| *Not applicable for some health sciences programs.* | SOC 240 Social Psychology 3-0-3 |

# A55280 - General Occupational Technology (Pre-Health Sciences) AAS

## Overview

**Program Code**
A55280

The General Occupational Technology (GOT) curriculum provides individuals with an opportunity to upgrade their skills and earn an associate degree, diploma, or certificate by taking courses that offer specific job knowledge and skills.

The curriculum content will be individualized for students according to their occupational interests and needs. A program of study for each student will be developed from any non-developmental level courses from approved curriculum programs of study offered by the college.

Graduates will become more effective workers, better qualified for advancements within their field of employment, and better qualified for a wide range of entry-level employment opportunities.

**Career Community**
Health Sciences

**Program Length**
5 semesters

**Credential**
Associate in Applied Science

## Program of Study

**Course Requirements for General Occupational Technology Degree (Pre-Health Sciences)**

All courses included in the GOT must be taken from approved Associate of Applied Science (AAS), diploma, or certificate programs.

**1. General Education Requirements (minimum 15 SHC)**

Associate Degree programs must contain a minimum of 15 semester hours of general education coursework. The general education hours must include a minimum of 6 semester hours in communications and at least one course from each of the following areas: humanities/fine arts, social/behavioral sciences, and natural sciences/mathematics.

**2. Major Requirements (minimum 49 SHC)**

AAS programs must include courses which offer specific job knowledge and skills. Work experience, including cooperative education, practicums, and internships, may be included in associate of applied science degrees up to a maximum of 8 semester hours of credit.

**3. Other Requirements (0-7 SHC)**

Local employer requirements, as well as college designated graduation requirements, may be accommodated in "other required hours." Up to a maximum of 7 semester hours of credit in other required hours may be included in an AAS degree program. Any course in the Combined Course Library that is educationally relevant to the student's career objective may be used in other required hours, as long as it is not a restricted or unique course.

Total Semester Credits Required: 64-76

# A55310 - Library and Information Technology AAS

## Overview

**Program Code**
A55310

**Program Description**
The Library and Information Technology curriculum is designed to prepare graduates for employment with organizations that use technology to process, manage, and communicate information. The objective is the development of generalists and specialist in the management of electronic library resources.

Students will complete courses designed to develop proficiency in the use of electronic resources for information retrieval, inventory control, information cataloging and classification, program promotion, circulation systems, audiovisual operations, hardware/software maintenance, problem solving and telecommunications.

Graduates should qualify for employment in a variety of positions in a library, media, learning resources, information, or instructional materials center or in any organization engaged in library-related activities.

**Credential**
Associate in Applied Science

## Degree Maps

Library & Information Technology, Associate in Applied Science Degree
**Total Credits**
69

| Semester | Term | Term Credits |
|---|---|---|
| 1st Semester | Fall | 19 |

**Courses**
- CIS110 - Introduction to Computers

**Term Credits** 3

**Courses**
- ENG111 - Writing and Inquiry

**Term Credits** 3

**Courses**
- LIB110 - Introduction to Libraries

**Term Credits** 3

**Courses**
- LIB111 - Library Info Resources and Services

**Term Credits** 3

**Courses**
- LIB113 - Library Cataloging & Classifying

**Term Credits** 3

**Courses**
- LIB213 - Cataloging Nonprint Materials

**Term Credits** 3

**Courses**
- ACA122 - College Transfer Success

**Term Credits** 1

| Semester | Term | Term Credits |
|---|---|---|
| 2nd Semester | Spring | 16 |

**Courses**
- CTS135 - Integrated Software Intro

**Term Credits** 4

**Courses**
- LIB112 - Library Collection Develop/Acquisitions

**Term Credits** 3

**Courses**
- LIB114 - Library Public Service Operations

**Term Credits** 3

**Courses**
- WEB110 - Web Development Fundamentals

**Term Credits** 3

**Courses**
- ACC120 - Principles of Financial Accounting
  **OR**
- BUS137 - Principles of Management
  **OR**
- BUS151 - People Skills
  **OR**
- BUS153 - Human Resource Management
  **OR**
- COM110 - Introduction to Communication
  **OR**
- EDU131 - Child, Family, and Community
  **OR**
- LIB212 - Library Services/Special Needs
  **OR**
- LIB213 - Cataloging Nonprint Materials
  **OR**
- LIB214 - Library Services/Children
  **OR**
- LIB215 - Library Management
  **OR**
- MKT120 - Principles of Marketing
  **OR**
- MKT223 - Customer Experience

**Term Credits** 3

| Semester | Term | Term Credits |
|---|---|---|
| 3rd Semester | Fall | 18 |

**Courses**
- CTS130 - Spreadsheet

**Term Credits** 3

**Courses**
- DBA110 - Database Concepts

**Term Credits** 3

**Courses**
- LIB211 - Library Program Development

**Term Credits** 3

**Courses**
- LIB214 - Library Services/Children

**Term Credits** 3

**Courses**
- WEB214 - Social Media

**Term Credits** 3

**Courses**
- Major Elective (Generic)
  **OR**
- ACC120 - Principles of Financial Accounting
  **OR**
- BUS137 - Principles of Management
  **OR**
- BUS151 - People Skills
  **OR**
- BUS153 - Human Resource Management
  **OR**
- COM110 - Introduction to Communication
  **OR**
- EDU131 - Child, Family, and Community
  **OR**
- LIB212 - Library Services/Special Needs
  **OR**
- LIB213 - Cataloging Nonprint Materials
  **OR**
- LIB214 - Library Services/Children
  **OR**
- LIB215 - Library Management
  **OR**
- MKT120 - Principles of Marketing
  **OR**
- MKT223 - Customer Experience

**Term Credits** 3

| Semester | Term | Term Credits |
|---|---|---|
| 4th Semester | Spring | 16 |

**Courses**
- ENG114 - Professional Research & Reporting

**Term Credits** 3

**Courses**
- LIB210 - Electronic Library Databases

**Term Credits** 3

**Courses**
- WBL111 - Work-Based Learning I

**Term Credits** 1

**Courses**
- Humanities/Fine Arts Electives (Generic)

**Term Credits** 3

**Courses**
- Social/Behavioral Science (Generic)

**Term Credits** 3

**Courses**
- MAT110 - Mathematical Measurement and Literacy
  **OR**
- MAT143 - Quantitative Literacy

**Term Credits** 3

## Approved AAS Electives

**Approved AAS Electives (C-L-SHC)**

| APPROVED HUMANITIES/FINE ARTS ELECTIVES | APPROVED SOCIAL/BEHAVIORAL SCIENCE ELECTIVES |
|---|---|
| ART 111 Art Appreciation 3-0-3<br>ART 114 Art History Survey I 3-0-3<br>ART 115 Art History Survey II 3-0-3<br>DRA 111 Theatre Appreciation 3-0-3<br>ENG 125 Creative Writing I 3-0-3<br>ENG 231 American Literature I 3-0-3<br>ENG 232 American Literature II 3-0-3<br>*ENG 241 British Literature I 3-0-3<br>*ENG 242 British Literature II 3-0-3<br>HUM 110 Technology and Society 3-0-3<br>HUM 115 Critical Thinking 3-0-3<br>HUM 120 Cultural Studies 3-0-3<br>HUM 122 Southern Culture 3-0-3<br>HUM 150 American Women's Studies 3-0-3<br>HUM 160 Introduction to Film 2-2-3<br>MUS 110 Music Appreciation 3-0-3<br>MUS 112 Introduction to Jazz 3-0-3<br>PHI 240 Introduction to Ethics 3-0-3<br>REL 110 World Religions 3-0-3<br>REL 211 Intro to Old Testament 3-0-3<br>REL 212 Intro to New Testament 3-0-3<br><br>**Not applicable for some health sciences programs.* | ANT 210 General Anthropology 3-0-3<br>ANT 220 Cultural Anthropology 3-0-3<br>ECO 151 Survey of Economics 3-0-3<br>ECO 251 Principles of Microeconomics 3-0-3<br>ECO 252 Principles of Macroeconomics 3-0-3<br>HIS 111 World Civilization I 3-0-3<br>HIS 112 World Civilization II 3-0-3<br>HIS 131 American History I 3-0-3<br>HIS 132 American History II 3-0-3<br>HIS 222 African-American History I 3-0-3<br>HIS 223 African-American History II 3-0-3<br>HIS 226 The Civil War 3-0-3<br>HIS 236 North Carolina History 3-0-3<br>POL 120 American Government 3-0-3<br>PSY 150 General Psychology 3-0-3<br>PSY 237 Social Psychology 3-0-3<br>PSY 241 Developmental Psychology 3-0-3<br>PSY 246 Adolescent Psychology 3-0-3<br>PSY 281 Abnormal Psychology 3-0-3<br>SOC 210 Introduction to Sociology 3-0-3<br>SOC 213 Sociology of the Family 3-0-3<br>SOC 220 Social Problems 3-0-3<br>SOC 225 Social Diversity 3-0-3<br>SOC 232 Social Context of Aging 3-0-3<br>SOC 240 Social Psychology 3-0-3 |

# A55480 - Public Safety Administration AAS

## Overview

**Program Code**
A55480

**Program Description**
The Public Safety Administration curriculum is designed to provide students, as well as practitioners, with knowledge and skills in the technical, managerial, and administrative areas necessary for entrance or advancement within various public safety and government organizations.

Course work in diverse subject areas includes public safety administration and education, interagency operations, crisis leadership, government and agency financial management, professional standards, incident management, administrative law, and supervision, while providing a streamlined pathway that recognizes the value of previously earned skillsets and credentials within the public safety sector.

Employment opportunities exist with fire or police departments, emergency management organizations, governmental agencies, industrial firms, correctional facilities, private industries, insurance organizations, educational organizations, security and protective organizations, and through self-employment opportunities.

**Career Pathway Options**
Associate in Applied Science Degree Public Safety Administration

**Career Community**
Public Safety

**Program Length**
5 semesters

**Credential**
Associate in Applied Science

## Degree Maps

Public Safety Administratin
**Total Credits**
31

| Semester | Term | Term Credits |
|---|---|---|
| 1st Semester | Fall | 10 |

**Courses**
- PAD151 - Introduction to Public Administration

**Term Credits** 3

**Courses**
- POL120 - American Government

**Term Credits** 3

**Courses**
- ENG111 - Writing and Inquiry

**Term Credits** 3

**Courses**
- ACA122 - College Transfer Success

**Term Credits** 1

**Courses**
- Major Elective (Generic)

**Term Credits** -

**Courses**
- Major Elective (Generic)

**Term Credits** -

| Semester | Term | Term Credits |
|---|---|---|
| 2nd Semester | Spring | 9 |

**Courses**
- PAD152 - Ethics in Government

**Term Credits** 3

**Courses**
- PAD254 - Grant Writing

**Term Credits** 3

**Courses**
- MAT143 - Quantitative Literacy

**Term Credits** 3

**Courses**
- Humanities/Fine Arts Elective (Generic)

**Term Credits** -

**Courses**
- Major Elective (Generic)

**Term Credits** -

| Semester | Term | Term Credits |
|---|---|---|
| 3rd Semester | Summer | 3 |

**Courses**
- PAD251 - Public Finance & Budgeting

**Term Credits** 3

**Courses**
- Communications, select one: ENG 112, ENG 114, COM 120, or COM 231 (Generic)

**Term Credits** -

| Semester | Term | Term Credits |
|---|---|---|
| 4th Semester | Fall | 3 |

**Courses**
- PAD252 - Public Policy Analysis

**Term Credits** 3

**Courses**
- Major Elective (Generic)

**Term Credits** -

**Courses**
- Major Elective (Generic)

**Term Credits** -

**Courses**
- Elective (Generic)

**Term Credits** -

**Courses**
- Elective (Generic)

**Term Credits** -

| Semester | Term | Term Credits |
|---|---|---|
| 5th Semester | Spring | 6 |

**Courses**
- CJC170 - Critical Incident Management for Public Safety

**Term Credits** 3

**Courses**
- CJC240 - Law Enforcement Management & Supervision

**Term Credits** 3

**Courses**
- Course from Other Major List (Generic)

**Term Credits** -

**Courses**
- Elective (Generic)

**Term Credits** -

**Courses**
- Elective (Generic)

**Term Credits** -

## Program of Study

**Major Elective subject areas:**

**Correction Services – take 1 group:**

Group 1

PST 120 NCDPS Correctional Officer Train 6-4-0-8

Group 2

CJC 141 Corrections 3-0-0-3
CJC 225 Crisis Intervention 3-0-0-3
CJC 232 Civil Liability 3-0-0-3

or

CJC 233 Correctional Law 3-0-0-3

**Law Enforcement Service, take 12 credits from:**

CJC 111 Intro to Criminal Justice 3-0-0-3
CJC 113 Juvenile Justice 3-0-0-3
CJC 120 Interviews/Interrogations 1-2-0-2
CJC 121 Law Enforcement Operations 3-0-0-3
CJC 131 Criminal Law 3-0-0-3
CJC 132 Court Procedures and Evidence 3-0-0-3
CJC 141 Corrections 3-0-0-3
CJC 221 Investigative Principles 3-2-0-4
CJC 225 Crisis Intervention 3-0-0-3
CJC 231 Constitutional Law 3-0-0-3

**Emergency and Fire Management, students may transfer in up to 12 credits from:**

EMS 110 EMT 6-6-3-9
EMS 122 EMS Clinical Practicum I 0-0-3-1
EMS 130 Pharmacology 3-3-0-4
EMS 131 Advanced Airway Management 1-2-0-2
EMS 160 Cardiology I 2-3-0-3
EMS 220 Cardiology II 2-3-0-3
EMS 221 EMS Clinical Practicum II 0-0-6-2
EMS 231 EMS Clinical Pract III 0-0-9-3
EMS 240 Patients w/Special Challenges 1-2-0-2
EMS 241 EMS Clinical Practicum IV 0-0-12-4
EMS 250 Medical Emergencies 3-3-0-4
EMS 260 Trauma Emergencies 1-3-0-2
EMS 270 Life Span Emergencies 3-3-0-4
EMS 285 EMS Capstone 1-3-0-2
FIP-120 Intro to Fire Protection 3-0-0-3
FIP-124 Fire Prevention & Public Ed 3-0-0-3
FIP-128 Detection & Investigation 3-0-0-3
FIP-136 Inspections & Codes 3-0-0-3
FIP-224 Fire Instructor I & II 4-0-0-4
FIP-230 Chem of Hazardous Mat I 5-0-0-5
FIP-226 Fire Officer I & II 4-0-0-4
FIP-240 Fire Service Supervision 3-0-0-3
FIP-248 Fire Svc Personnel Adm 3-0-0-3

**Security and Loss Prevention Services:**

CJC 151 Intro to Loss Prevention 3-0-0-3
CJC 152 Intro to Sec/Protect Service 3-0-0-3
CJC 153 Private Security Operations 3-0-0-3
CJC 154 Private Security Business 3-0-0-3

**Other Major List, take 20 credits:**

BUS 151 People Skills 3-0-0-3
BUS 153 Human Resource Management 3-0-0-3
BUS 270 Professional Development 3-0-0-3
CIS 110 Intro to Computers 2-2-0-3
CJC 110 Basic Law Enforcement (BLET) 10-30-0-20
CJC 111 Intro to Criminal Justice 3-0-0-3
CJC 120 Interviews/Interrogations 1-2-0-2
CJC 121 Law Enforcement Operations 3-0-0-3
CJC 131 Criminal Law 3-0-0-3
CJC 132 Court Procedure & Evidence 3-0-0-3
CJC 141 Corrections 3-0-0-3
CJC 113 Juvenile Justice 3-0-0-3
CJC 221 Investigative Principles 3-2-0-4
CJC 231 Constitutional Law 3-0-0-3
CJC 225 Crisis Intervention 3-0-0-3
CTI 110 IT Foundations 2-2-0-3
CTI 120 Network & Security Foundations 2-2-0-3
CTS 130 Spreadsheets 2-2-0-3
HSE 110 Intro to Human Services 2-2-0-3
HEA 110 Personal Health/Wellness 3-0-0-3
HEA 112 First Aid/CPR 1-2-0-2
SOC 210 Intro to Sociology 3-0-0-3
SOC 220 Social Problems 3-0-0-3
SPA 111 Elementary Spanish I 3-0-0-3

WBL 111 Work Based Learning 1-10-0-1
FIP-120 Intro to Fire Protection 3-0-0-3
FIP-124 Fire Prevention & Public Ed 3-0-0-3
FIP-128 Detection & Investigation 3-0-0-3
FIP-136 Inspections & Codes 3-0-0-3
FIP-224 Fire Instructor I & II 4-0-0-4
FIP-230 Chem of Hazardous Mat I 5-0-0-5
FIP-226 Fire Officer I & II 4-0-0-4
FIP-240 Fire Service Supervision 3-0-0-3
FIP-248 Fire Svc Personnel Adm 3-0-0-3
FIP-276 Managing Fire Services 3-0-0-3
PST-151 NC Justice Academy Training 1-0-0-1
PST-152 NC Justice Academy Training 1-2-0-2
PST-153 NC Justice Academy Training 1-4-0-3
PST-154 NC Justice Academy Training 2-6-0-4
PST-155 NC Justice Academy Training 2-9-0-5
PST-156 NC Justice Academy Training 2-12-0-6
PST-157 NC Justice Academy Training 2-15-0-7
PST-158 NC Justice Academy Training 2-18-0-8
PST-159 NC Justice Academy Training 2-21-0-9
PST-161 NC OSFM Training 1-0-0-1
PST-162 NC OSFM Training 1-2-0-2
PST-163 NC OSFM Training 1-4-0-3
PST-164 NC OSFM Training 2-6-0-4
PST-165 NC OSFM Training 2-9-0-5
PST-166 NC OSFM Training 2-12-0-6
PST-167 NC OSFM Training 2-15-0-7
PST-168 NC OSFM Training 2-18-0-8
PST-169 NC OSFM Training 2-21-0-9
PST-171 NCCCS Public Safety Training 1-0-0-1
PST-172 NCCCS Public Safety Training 1-2-0-2
PST-173 NCCCS Public Safety Training 1-4-0-3
PST-174 NCCCS Public Safety Training 2-6-0-4
PST-175 NCCCS Public Safety Training 2-9-0-5
PST-176 NCCCS Public Safety Training 2-12-0-6
PST-177 NCCCS Public Safety Training 2-15-0-7
PST-178 NCCCS Public Safety Training 2-18-0-8
PST-179 NCCCS Public Safety Training 2-21-0-9
PST-181 NCDPS Unarmed Sec Guard Trg 1-0-0-1
PST-182 NCDPS Armed Sec Ofc Inst Trg 2-0-0-2
PST-189 NCDOJ Prof Cert Program 9-0-0-9

## Approved AAS Electives

**Approved AAS Electives (C-L-SHC)**

| APPROVED HUMANITIES/FINE ARTS ELECTIVES | APPROVED SOCIAL/BEHAVIORAL SCIENCE ELECTIVES |
|---|---|
| ART 111 Art Appreciation 3-0-3 | ANT 210 General Anthropology 3-0-3 |
| ART 114 Art History Survey I 3-0-3 | ANT 220 Cultural Anthropology 3-0-3 |
| ART 115 Art History Survey II 3-0-3 | ECO 151 Survey of Economics 3-0-3 |
| DRA 111 Theatre Appreciation 3-0-3 | ECO 251 Principles of Microeconomics 3-0-3 |
| ENG 125 Creative Writing I 3-0-3 | ECO 252 Principles of Macroeconomics 3-0-3 |
| ENG 231 American Literature I 3-0-3 | HIS 111 World Civilization I 3-0-3 |
| ENG 232 American Literature II 3-0-3 | HIS 112 World Civilization II 3-0-3 |
| *ENG 241 British Literature I 3-0-3 | HIS 131 American History I 3-0-3 |
| *ENG 242 British Literature II 3-0-3 | HIS 132 American History II 3-0-3 |
| HUM 110 Technology and Society 3-0-3 | HIS 222 African-American History I 3-0-3 |
| HUM 115 Critical Thinking 3-0-3 | HIS 223 African-American History II 3-0-3 |
| HUM 120 Cultural Studies 3-0-3 | HIS 226 The Civil War 3-0-3 |
| HUM 122 Southern Culture 3-0-3 | HIS 236 North Carolina History 3-0-3 |
| HUM 150 American Women's Studies 3-0-3 | POL 120 American Government 3-0-3 |
| HUM 160 Introduction to Film 2-2-3 | PSY 150 General Psychology 3-0-3 |
| MUS 110 Music Appreciation 3-0-3 | PSY 237 Social Psychology 3-0-3 |
| MUS 112 Introduction to Jazz 3-0-3 | PSY 241 Developmental Psychology 3-0-3 |
| PHI 240 Introduction to Ethics 3-0-3 | PSY 246 Adolescent Psychology 3-0-3 |
| REL 110 World Religions 3-0-3 | PSY 281 Abnormal Psychology 3-0-3 |
| REL 211 Intro to Old Testament 3-0-3 | SOC 210 Introduction to Sociology 3-0-3 |
| REL 212 Intro to New Testament 3-0-3 | SOC 213 Sociology of the Family 3-0-3 |
| | SOC 220 Social Problems 3-0-3 |
| | SOC 225 Social Diversity 3-0-3 |
| | SOC 232 Social Context of Aging 3-0-3 |
| *Not applicable for some health sciences programs.* | SOC 240 Social Psychology 3-0-3 |

# A60160EV - Automotive Systems Technology Electric Vehicle Track AAS

## Overview

**Program Code**
A60160EV

**Program Description**
This curriculum prepare 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.

Course work may include transportation systems theory, braking systems, climate

control, design parameters, drive trains, electrical/electronic systems, engine repair, engine performance, environmental regulations, materials, product finish, safety, steering/suspension, transmission/transaxles, and sustainable transportation, depending on the program major area chosen.

Graduates should be prepared to take professional licensure exams, which correspond to certain programs of study, and to enter careers as entry-level technicians in the transportation industry.

Automotive Systems Technology that prepares individuals to apply technical knowledge and skills to repair, service, and maintain all types of automobiles. The program includes instruction in brake systems, electrical systems, engine performance, engine repair, suspension and steering, automatic and manual transmissions and drive trains, and heating and air condition systems

**Career Community**
Applied Technologies

**Credential**
Associate in Applied Science

## Degree Maps

Automotive Systems Technology, Electrical Vehicle Track, Associate in Applied Science
**Total Credits**
64

| Semester | Term | Term Credits |
|---|---|---|
| 1st Semester | Fall | 12 |

**Courses**
- ACA122 - College Transfer Success

**Term Credits** 1

**Courses**
- ATT115 - Green Transportation Safety and Service

**Term Credits** 2

**Courses**
- TRN110 - Introduction to Transport Technology

**Term Credits** 2

**Courses**
- TRN120 - Basic Transportation Electricity

**Term Credits** 5

**Courses**
- TRN170 - PC Skills for Transportation

**Term Credits** 2

| Semester | Term | Term Credits |
|---|---|---|
| 2nd Semester | Spring | 14 |

**Courses**
- AUT141 - Suspension & Steering Systems

**Term Credits** 3

**Courses**
- AUT141A - Suspension & Steering Lab

**Term Credits** 1

**Courses**
- AUT163 - Advanced Automotive Electricity

**Term Credits** 3

**Courses**
- AUT163A - Advanced Automotive Electricity Lab

**Term Credits** 1

**Courses**
- TRN130 - Introduction to Sustainable Transportation

**Term Credits** 3

**Courses**
- ENG111 - Writing and Inquiry

**Term Credits** 3

| Semester | Term | Term Credits |
|---|---|---|
| 3rd Semester | Summer | 11 |

**Courses**
- ATT125 - Hybrid-Electric Transportation

**Term Credits** 4

**Courses**
- AUT114 - Safety and Emissions

**Term Credits** 2

**Courses**
- AUT114A - Safety and Emissions Lab

**Term Credits** 1

**Courses**
- TRN140 - Transportation Climate Control

**Term Credits** 2

**Courses**
- TRN140A - Transportation Climate Control Lab

**Term Credits** 2

| Semester | Term | Term Credits |
|---|---|---|
| 4th Semester | Fall | 15 |

**Courses**
- AUT151 - Brake Systems

**Term Credits** 3

**Courses**
- AUT151A - Brakes Systems Lab

**Term Credits** 1

**Courses**
- ELC117 - Motors and Controls

**Term Credits** 4

**Courses**
- Communications requirement (Generic)

**Term Credits** 3

**Courses**
- Mathematics requirement (Generic)

**Term Credits** 4

| Semester | Term | Term Credits |
|---|---|---|
| 5th Semester | Spring | 12 |

**Courses**
- ATT140 - Emerging Transportation Technology

**Term Credits** 3

**Courses**
- TRN145 - Advanced Transportation Electronics

**Term Credits** 3

**Courses**
- Humanities/Fine Arts Elective (Generic)

**Term Credits** 3

**Courses**
- Social/Behavioral Science Elective (Generic)

**Term Credits** 3

## Approved AAS Electives

**Approved AAS Electives (C-L-SHC)**

| APPROVED HUMANITIES/FINE ARTS ELECTIVES | APPROVED SOCIAL/BEHAVIORAL SCIENCE ELECTIVES |
|---|---|
| ART 111 Art Appreciation 3-0-3 | ANT 210 General Anthropology 3-0-3 |
| ART 114 Art History Survey I 3-0-3 | ANT 220 Cultural Anthropology 3-0-3 |
| ART 115 Art History Survey II 3-0-3 | ECO 151 Survey of Economics 3-0-3 |
| DRA 111 Theatre Appreciation 3-0-3 | ECO 251 Principles of Microeconomics 3-0-3 |
| ENG 125 Creative Writing I 3-0-3 | ECO 252 Principles of Macroeconomics 3-0-3 |
| ENG 231 American Literature I 3-0-3 | HIS 111 World Civilization I 3-0-3 |
| ENG 232 American Literature II 3-0-3 | HIS 112 World Civilization II 3-0-3 |
| *ENG 241 British Literature I 3-0-3 | HIS 131 American History I 3-0-3 |
| *ENG 242 British Literature II 3-0-3 | HIS 132 American History II 3-0-3 |
| HUM 110 Technology and Society 3-0-3 | HIS 222 African-American History I 3-0-3 |
| HUM 115 Critical Thinking 3-0-3 | HIS 223 African-American History II 3-0-3 |
| HUM 120 Cultural Studies 3-0-3 | HIS 226 The Civil War 3-0-3 |
| HUM 122 Southern Culture 3-0-3 | HIS 236 North Carolina History 3-0-3 |
| HUM 150 American Women's Studies 3-0-3 | POL 120 American Government 3-0-3 |
| HUM 160 Introduction to Film 2-2-3 | PSY 150 General Psychology 3-0-3 |
| MUS 110 Music Appreciation 3-0-3 | PSY 237 Social Psychology 3-0-3 |
| MUS 112 Introduction to Jazz 3-0-3 | PSY 241 Developmental Psychology 3-0-3 |
| PHI 240 Introduction to Ethics 3-0-3 | PSY 246 Adolescent Psychology 3-0-3 |
| REL 110 World Religions 3-0-3 | PSY 281 Abnormal Psychology 3-0-3 |
| REL 211 Intro to Old Testament 3-0-3 | SOC 210 Introduction to Sociology 3-0-3 |
| REL 212 Intro to New Testament 3-0-3 | SOC 213 Sociology of the Family 3-0-3 |
| | SOC 220 Social Problems 3-0-3 |
| | SOC 225 Social Diversity 3-0-3 |
| | SOC 232 Social Context of Aging 3-0-3 |
| *Not applicable for some health sciences programs.* | SOC 240 Social Psychology 3-0-3 |

# A60160T - Automotive Systems Technology Traditional Track AAS

## Overview

**Program Code**
A60160T

**Program Description**
This curriculum prepare 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.

Course work may include transportation systems theory, braking systems, climate

control, design parameters, drive trains, electrical/electronic systems, engine repair, engine performance, environmental regulations, materials, product finish, safety, steering/suspension, transmission/transaxles, and sustainable transportation, depending on the program major area chosen.

Graduates should be prepared to take professional licensure exams, which correspond to certain programs of study, and to enter careers as entry-level technicians in the transportation industry.

Automotive Systems Technology that prepares individuals to apply technical knowledge and skills to repair, service, and maintain all types of automobiles. The program includes instruction in brake systems, electrical systems, engine performance, engine repair, suspension and steering, automatic and manual transmissions and drive trains, and heating and air condition systems

**Career Community**
Applied Technologies

**Credential**
Associate in Applied Science

## Degree Maps

Automotive Systems Technology Associate in Applied Science
**Total Credits**
72

| Semester | Term | Term Credits |
|---|---|---|
| 1st Semester | Fall | 16 |

**Courses**
- AUT151 - Brake Systems

**Term Credits** 3

**Courses**
- AUT151A - Brakes Systems Lab

**Term Credits** 1

**Courses**
- TRN110 - Introduction to Transport Technology

**Term Credits** 2

**Courses**
- TRN120 - Basic Transportation Electricity

**Term Credits** 5

**Courses**
- TRN170 - PC Skills for Transportation

**Term Credits** 2

**Courses**
- MAT110 - Mathematical Measurement and Literacy
  **OR**
- PHY110 - Conceptual Physics
- **AND** PHY110A - Conceptual Physics Lab

**Term Credits** 3

| Semester | Term | Term Credits |
|---|---|---|
| 2nd Semester | Spring | 15 |

**Courses**
- AUT141 - Suspension & Steering Systems

**Term Credits** 3

**Courses**
- AUT141A - Suspension & Steering Lab

**Term Credits** 1

**Courses**
- AUT163 - Advanced Automotive Electricity

**Term Credits** 3

**Courses**
- AUT163A - Advanced Automotive Electricity Lab

**Term Credits** 1

**Courses**
- AUT181 - Engine Performance 1

**Term Credits** 3

**Courses**
- AUT181A - Engine Performance 1 Lab

**Term Credits** 1

**Courses**
- ENG111 - Writing and Inquiry

**Term Credits** 3

| Semester | Term | Term Credits |
|---|---|---|
| 3rd Semester | Summer | 11 |

**Courses**
- AUT114 - Safety and Emissions

**Term Credits** 2

**Courses**
- AUT114A - Safety and Emissions Lab

**Term Credits** 1

**Courses**
- AUT183 - Engine Performance 2

**Term Credits** 4

**Courses**
- TRN140 - Transportation Climate Control

**Term Credits** 2

**Courses**
- TRN140A - Transportation Climate Control Lab

**Term Credits** 2

| Semester | Term | Term Credits |
|---|---|---|
| 4th Semester | Fall | 14 |

**Courses**
- AUT116 - Engine Repair

**Term Credits** 3

**Courses**
- AUT116A - Engine Repair Lab

**Term Credits** 1

**Courses**
- AUT231 - Manual Transmissions/Transaxles/Drive Trains

**Term Credits** 3

**Courses**
- AUT231A - Manual Transmissions/Transaxles/Drive Trains Lab

**Term Credits** 1

**Courses**
- AUT281 - Advanced Engine Performance

**Term Credits** 3

**Courses**
- ENG114 - Professional Research & Reporting

**Term Credits** 3

| Semester | Term | Term Credits |
|---|---|---|
| 5th Semester | Spring | 16 |

**Courses**
- AUT221 - Automatic Transmissions/Transaxles

**Term Credits** 3

**Courses**
- AUT221A - Automatic Transmissions/Transaxles Lab

**Term Credits** 1

**Courses**
- TRN130 - Introduction to Sustainable Transportation

**Term Credits** 3

**Courses**
- TRN145 - Advanced Transportation Electronics

**Term Credits** 3

**Courses**
- Humanities/Fine Arts Elective (Generic)

**Term Credits** 3

**Courses**
- Social/Behavioral Science Elective (Generic)

**Term Credits** 3

## Approved AAS Electives

**Approved AAS Electives (C-L-SHC)**

| APPROVED HUMANITIES/FINE ARTS ELECTIVES | APPROVED SOCIAL/BEHAVIORAL SCIENCE ELECTIVES |
|---|---|
| ART 111 Art Appreciation 3-0-3 | ANT 210 General Anthropology 3-0-3 |
| ART 114 Art History Survey I 3-0-3 | ANT 220 Cultural Anthropology 3-0-3 |
| ART 115 Art History Survey II 3-0-3 | ECO 151 Survey of Economics 3-0-3 |
| DRA 111 Theatre Appreciation 3-0-3 | ECO 251 Principles of Microeconomics 3-0-3 |
| ENG 125 Creative Writing I 3-0-3 | ECO 252 Principles of Macroeconomics 3-0-3 |
| ENG 231 American Literature I 3-0-3 | HIS 111 World Civilization I 3-0-3 |
| ENG 232 American Literature II 3-0-3 | HIS 112 World Civilization II 3-0-3 |
| *ENG 241 British Literature I 3-0-3 | HIS 131 American History I 3-0-3 |
| *ENG 242 British Literature II 3-0-3 | HIS 132 American History II 3-0-3 |
| HUM 110 Technology and Society 3-0-3 | HIS 222 African-American History I 3-0-3 |
| HUM 115 Critical Thinking 3-0-3 | HIS 223 African-American History II 3-0-3 |
| HUM 120 Cultural Studies 3-0-3 | HIS 226 The Civil War 3-0-3 |
| HUM 122 Southern Culture 3-0-3 | HIS 236 North Carolina History 3-0-3 |
| HUM 150 American Women's Studies 3-0-3 | POL 120 American Government 3-0-3 |
| HUM 160 Introduction to Film 2-2-3 | PSY 150 General Psychology 3-0-3 |
| MUS 110 Music Appreciation 3-0-3 | PSY 237 Social Psychology 3-0-3 |
| MUS 112 Introduction to Jazz 3-0-3 | PSY 241 Developmental Psychology 3-0-3 |
| PHI 240 Introduction to Ethics 3-0-3 | PSY 246 Adolescent Psychology 3-0-3 |
| REL 110 World Religions 3-0-3 | PSY 281 Abnormal Psychology 3-0-3 |
| REL 211 Intro to Old Testament 3-0-3 | SOC 210 Introduction to Sociology 3-0-3 |
| REL 212 Intro to New Testament 3-0-3 | SOC 213 Sociology of the Family 3-0-3 |
| | SOC 220 Social Problems 3-0-3 |
| | SOC 225 Social Diversity 3-0-3 |
| | SOC 232 Social Context of Aging 3-0-3 |
| *Not applicable for some health sciences programs.* | SOC 240 Social Psychology 3-0-3 |

# C1541010 - Sustainable Agriculture Certificate

## Overview

**Program Code**
C1541010

**Career Pathway Options**
Associate in Applied Science in Sustainable Agriculture.

**Career Community**
STEM

**Program Length**
2 semesters

**Credential**
Certificate

## Program Outcomes

## Degree Maps

Agriculture Sustainability Certificate
**Total Credits**
18

| Semester | Term | Term Credits |
|---|---|---|
| 1st Semester | Fall | 12 |

**Courses**
- AGR139 - Introduction to Sustainable Agriculture

**Term Credits** 3

**Courses**
- AGR170 - Soil Science

**Term Credits** 3

**Courses**
- AGR265 - Organic Crop Production: Spring

**OR**
- AGR266 - Organic Crop Production: Fall

**Term Credits** 3

**Courses**
- AGR267 - Permaculture

**Term Credits** 3

| Semester | Term | Term Credits |
|---|---|---|
| 2nd Semester | Spring | 6 |

**Courses**
- AGR121 - Biological Pest Management

**Term Credits** 3

**Courses**
- AGR265 - Organic Crop Production: Spring

**OR**
- AGR266 - Organic Crop Production: Fall

**OR**
- ANS111 - Sustainable Livestock Management

**Term Credits** 3

# C1541020 - Sustainable Livestock Certificate

## Overview

**Program Code**
C1541020

**Career Pathway Options**
Associate in Applied Science in Sustainable Agriculture

**Career Community**
STEM

**Program Length**
2 semesters

**Credential**
Certificate

## Program Outcomes

## Degree Maps

Sustainable Livestock Systems Certificate
**Total Credits**
15

| Semester | Term | Term Credits |
|---|---|---|
| 1st Semester | Fall | 9 |

**Courses**
- AGR170 - Soil Science

**Term Credits** 3

**Courses**
- AGR214 - Agricultural Marketing

**Term Credits** 3

**Courses**
- ANS110 - Animal Science

**Term Credits** 3

| Semester | Term | Term Credits |
|---|---|---|
| 2nd Semester | Spring | 6 |

**Courses**
- AGR139 - Introduction to Sustainable Agriculture

**Term Credits** 3

**Courses**
- ANS111 - Sustainable Livestock Management

**Term Credits** 3

## C1541030 - Sustainable Vegetable Production Certificate

### Overview

**Program Code**
C1541030

**Career Pathway Options**
Associate in Applied Science in Sustainable Agriculture.

**Career Community**
STEM

**Program Length**
2 semesters

**Credential**
Certificate

### Program Outcomes

### Degree Maps

Sustainable Vegetable Production Certificate
**Total Credits**
18

| Semester | Term | Term Credits |
|---|---|---|
| 1st Semester | Fall | 12 |

**Courses**
- AGR139 - Introduction to Sustainable Agriculture

**Term Credits** 3

**Courses**
- AGR170 - Soil Science

**Term Credits** 3

**Courses**
- AGR214 - Agricultural Marketing

**Term Credits** 3

**Courses**
- AGR266 - Organic Crop Production: Fall

**Term Credits** 3

| Semester | Term | Term Credits |
|---|---|---|
| 2nd Semester | Spring | 6 |

**Courses**
- AGR121 - Biological Pest Management

**Term Credits** 3

**Courses**
- AGR265 - Organic Crop Production: Spring

**Term Credits** 3

## C15410EL - Sustainable Agriculture Ecological Landscaping Certificate

### Overview

**Program Code**
C15410EL

This certificate is designed to give students the tools necessary to become competent practitioners of ecological gardening and effective land stewards. Courses in plant science, plant propagation, biological pest management and design are paired with hands-on gardening labs and opportunities to tour and understand the key principles of ecological landscaping with professionals.

**Career Community**
STEM

**Program Length**
2 semesters

**Credential**
Certificate

### Degree Maps

Ecolological Landscaping Certificate
**Total Credits**
17

| Semester | Term | Term Credits |
|---|---|---|
| 1st Semester | Fall | 8 |

**Courses**
- HOR156 - Introduction to Ecological Landscaping

**Term Credits** 3

**Courses**
- HOR168 - Plant Propagation

**Term Credits** 3

**Courses**
- LSG121 - Fall Gardening Lab

**Term Credits** 2

| Semester | Term | Term Credits |
|---|---|---|
| 2nd Semester | Spring | 9 |

**Courses**
- AGR121 - Biological Pest Management

**Term Credits** 3

**Courses**
- AGR160 - Plant Science

**Term Credits** 3

**Courses**
- HOR112 - Landscape Design I

**Term Credits** 3

## C20100 - Biotechnology Bioprocess Manufacturing Technology Certificate

### Overview

**Program Code**
C20100

**Career Pathway Options**
Associate in Applied Science Degree in Bioprocess Technology; Diploma in Bioprocess Technology

**Career Community**
Applied Technologies

**Program Length**
2 semesters

**Credential**
Certificate

### Program Outcomes

### Degree Maps

Biotechnology - Bioprocess Manufacturing Technology, Certificate
**Total Credits**
16

| Semester | Term | Term Credits |
|---|---|---|
| 1st Semester | Fall | 8 |

**Courses**
- BPM110 - Bioprocess Practices

**Term Credits** 5

**Courses**
- PTC110 - Industrial Environment

**Term Credits** 3

| Semester | Term | Term Credits |
|---|---|---|
| 2nd Semester | Spring | 8 |

**Courses**
- BPM111 - Bioprocess Measurements

**Term Credits** 4

**Courses**
- BIO110 - Principles of Biology

**Term Credits** 4

## C20100QC - Biotechnology Quality Control Certificate

### Overview

**Program Code**
C20100QC

**Program Description**
This curriculum prepares individuals to apply scientific principles and technical skills in support of biologists and biotechnologists in research, industrial, and government settings.

Coursework, most of which is hands-on, includes topics such as fermentation technology, cell culturing, protein purification, biologic synthesis, assaying and testing, quality control, industrial microbiology, bioprocessing, chromatography and bioseparation, genetic technology, laboratory and hazardous materials safety, and computer applications

Graduates should be qualified for employment in various biotechnology-related laboratory and manufacturing areas of industry and government, including research and development, QA, QC, process technicians, sales, and customer service.

This Certificate will provide the option of earning an additional credential with the Bioprocess Technology Degree (A20100). Students can choose to take ISC-129 (3 credits) to earn the AAS with the QC certificate (C20100QC), preparing students for roles as Quality Control lab technicians. This program introduces students to essential quality control (QC) testing methods used in biopharmaceutical manufacturing. Topics include analytical chemistry techniques, microbiological testing, raw material verification, in-process control, and final product release testing. Emphasis is placed on quality testing in industrial laboratories, regulatory compliance, Good Laboratory Practice (GLP), data integrity, and hands-on skills. This certificate can also be earned as a short-term non-degree credential.

**Career Community**
Applied Technologies

**Program Length**
3 semesters

**Credential**
Certificate

### Degree Maps

Biotechnology - Bioprocess Quality Control, Certificate
**Total Credits**
16

| Semester | Term | Term Credits |
|---|---|---|
| 1st Semester | Fall | 8 |

**Courses**
- BPM110 - Bioprocess Practices

**Term Credits** 5

**Courses**
- PTC110 - Industrial Environment

**Term Credits** 3

| Semester | Term | Term Credits |
|---|---|---|
| 2nd Semester | Spring | 8 |

**Courses**
- BPM111 - Bioprocess Measurements

**Term Credits** 4

**Courses**
- ISC129 - Quality Testing Lab Techniques

**Term Credits** 3

**Courses**
- PTC228 - Pharmaceutical Issues

**Term Credits** 1

## C25120C0 - Business Administration Human Resources Management Certificate

### Overview

**Program Code**
C25120C0

**Career Pathway Options**
Associate in Applied Science Degree in Business Administration-Human Resource Management Track

**Career Community**
Business Technologies

**Program Length**
2 semesters

**Credential**
Certificate

### Program Outcomes

### Degree Maps

Human Resource Management Certificate
**Total Credits**
18

| Semester | Term | Term Credits |
|---|---|---|
| 1st Semester | Fall | 9 |

**Courses**
- BUS234 - Training and Development

**Term Credits** 3

**Courses**
- BUS256 - Recruiting, Selection, & Personnel Planning

**Term Credits** 3

**Courses**
- BUS258 - Compensation and Benefits

**Term Credits** 3

| Semester | Term | Term Credits |
|---|---|---|
| 2nd Semester | Spring | 9 |

**Courses**
- BUS137 - Principles of Management

**Term Credits** 3

**Courses**
- BUS217 - Employment Law and Regulations

**Term Credits** 3

**Courses**
- Major Elective (Generic)

**Term Credits** 3

## C25120E0 - Business Administration Entrepreneur Certificate

### Overview

**Program Code**
C25120E0

**Career Pathway Options**
Associate in Applied Science Degree in Business Administration

**Career Community**
Business Technologies

**Program Length**
2 semesters

**Credential**
Certificate

### Program Outcomes

### Degree Maps

Entrepreneur Certificate
**Total Credits**
16

| Semester | Term | Term Credits |
|---|---|---|

| 1st Semester | Fall | 10 |
|---|---|---|

**Courses**
- ACC120 - Principles of Financial Accounting

**Term Credits** 4

**Courses**
- BUS137 - Principles of Management

**Term Credits** 3

**Courses**
- BUS230 - Small Business Management

**Term Credits** 3

| Semester | Term | Term Credits |
|---|---|---|
| 2nd Semester | Spring | 6 |

**Courses**
- CIS110 - Introduction to Computers

**Term Credits** 3

**Courses**
- MKT120 - Principles of Marketing

**Term Credits** 3

## C25120M0 - Business Administration Manager Trainee Certificate

### Overview

**Program Code**
C25120M0

**Career Pathway Options**
Associate in Applied Science Degree in Business Administration

**Career Community**
Business Technologies

**Program Length**
2 semesters

**Credential**
Certificate

### Program Outcomes

### Degree Maps

Manager Trainee Certificate
**Total Credits**
18

| Semester | Term | Term Credits |
|---|---|---|
| 1st Semester | Fall | 9 |

**Courses**
- BUS110 - Introduction to Business

**Term Credits** 3

**Courses**
- BUS137 - Principles of Management

**Term Credits** 3

**Courses**
- MKT223 - Customer Experience

**Term Credits** 3

| Semester | Term | Term Credits |
|---|---|---|
| 2nd Semester | Spring | 9 |

**Courses**
- BUS151 - People Skills

**Term Credits** 3

**Courses**
- BUS153 - Human Resource Management

**Term Credits** 3

**Courses**
- CIS110 - Introduction to Computers

**Term Credits** 3

## C25120RM - Business Administration Retail Management Certificate

### Overview

**Program Code**
C25120RM

**Career Pathway Options**
Diploma in Business Administration; Associate in Applied Science Degree in Business Administration

**Career Community**
Business Technologies

**Program Length**
2 semesters

**Credential**
Certificate

### Program Outcomes

### Degree Maps

Retail Management Certificate
**Total Credits**
18

| Semester | Term | Term Credits |
|---|---|---|
| 1st Semester | Fall | 10 |

**Courses**
- ACC120 - Principles of Financial Accounting

**Term Credits** 4

**Courses**
- BUS137 - Principles of Management

**Term Credits** 3

**Courses**
- MKT223 - Customer Experience

**Term Credits** 3

| Semester | Term | Term Credits |
|---|---|---|
| 2nd Semester | Spring | 8 |

**Courses**
- ACC121 - Principles of Managerial Accounting

**Term Credits** 4

**Courses**
- BUS153 - Human Resource Management

**Term Credits** 3

**Courses**
- WBL111 - Work-Based Learning I

**Term Credits** 1

18

| Semester | Term | Term Credits |
|---|---|---|
| 1st Semester | Fall | 9 |

**Courses**
- BUS110 - Introduction to Business

**Term Credits** 3

**Courses**
- MKT120 - Principles of Marketing

**Term Credits** 3

**Courses**
- WEB214 - Social Media

**Term Credits** 3

| Semester | Term | Term Credits |
|---|---|---|
| 2nd Semester | Spring | 9 |

**Courses**
- MKT223 - Customer Experience

**Term Credits** 3

**Courses**
- MKT220 - Advertising and Sales Promotion

**Term Credits** 3

**Courses**
- MKT232 - Social Media Marketing

**Term Credits** 3

# C25120SM - Business Administration Social Media Marketing Certificate

## Overview

**Program Code**
C25120SM

**Career Pathway Options**
Associate in Applied Science Degree in Business Administration

**Career Community**
Business Technologies

**Program Length**
2 semesters

**Credential**
Certificate

## Program Outcomes

## Degree Maps

Social Media Marketing Certificate
**Total Credits**

# C25310IC - Medical Office Administration Insurance Coding Certificate

## Overview

**Program Code**
C25310IC

**Program Description**
The Medical Office Administration curriculum prepares individuals for employment as medical administrative personnel in the areas of medical office, medical billing and coding, dental office, patient services, and medical documents.

Course work includes medical terminology, computer applications, medical office management, medical coding, medical insurance and billing, medical legal and ethical issues, oral and written communication, and other topics depending on the subject area selected within this curriculum.

Graduates should qualify for employment opportunities in a variety of medical office positions in medical and dental offices, hospitals, insurance companies, laboratories, medical supply companies, and other healthcare related organizations. Upon graduation, students may be eligible to sit for industry recognized certification exams.

**Career Pathway Options**
Associate in Applied Science Degree in Medical Office Administration (Higher entrance standards required); Medical Office Insurance Coding Certificate

**Career Community**
Business Technologies

**Program Length**
2 semesters

**Credential**
Certificate

## Program Outcomes

## Degree Maps

Medical Office Insurance Coding Certificate
**Total Credits**
18

| Semester | Term | Term Credits |
|---|---|---|
| 1st Semester | Fall | 9 |

**Courses**
- OST141 - Medical Office Terms I

**Term Credits** 3

**Courses**
- OST148 - Medical Insurance and Billing

**Term Credits** 3

**Courses**
- OST142 - Medical Office Terms II

**Term Credits** 3

| Semester | Term | Term Credits |
|---|---|---|
| 2nd Semester | Spring | 9 |

**Courses**
- OST247 - Procedure Coding

**Term Credits** 3

**Courses**
- OST248 - Diagnostic Coding

**Term Credits** 3

**Courses**
- OST149 - Medical Legal Issues

**Term Credits** 3

# C25370R0 - Office Management Receptionist Certificate

## Overview

**Program Code**
C25370R0

**Program Description**
The Office Administration curriculum prepares individuals for employment as administrative office personnel who use skills in the areas of office management, office finance, legal office, virtual office, customer service, and office software.

Course work includes computer applications, oral and written communication, analysis and coordination of office tasks and procedures, records management, and other topics depending on the subject area selected within this curriculum.

Graduates should qualify for employment opportunities in a variety of office positions in business, government, and industry. Upon graduation, students may be eligible to sit for industry recognized certification exams.

**Career Pathway Options**
Associate in Applied Science Degree in Medical Office Administration (Higher entrance standards required); Diploma in Office Administration (Higher entrance standards required); Receptionist Certificate.

**Career Community**
Business Technologies

**Program Length**
2 semesters

**Credential**
Certificate

## Program Outcomes

## Degree Maps

Receptionist Certificate
**Total Credits**
18

| Semester | Term | Term Credits |
|---|---|---|
| 1st Semester | Fall | 9 |

**Courses**
- OST136 - Word Processing

**Term Credits** 3

**Courses**
- OST164 - Office Editing

**Term Credits** 3

**Courses**
- BUS110 - Introduction to Business

**Term Credits** 3

| Semester | Term | Term Credits |
|---|---|---|
| 2nd Semester | Spring | 9 |

**Courses**
- OST137 - Office Applications I

**Term Credits** 3

**Courses**
- OST184 - Office Information Management

**Term Credits** 3

**Courses**
- OST289 - Office Administration Capstone

**Term Credits** 3

## C25380 - Paralegal Technology Certificate

### Overview

**Program Code**
C25380

**Career Community**
Business Technologies

**Program Length**
2 semesters

**Credential**
Certificate

### Program Outcomes

### Degree Maps

Paralegal Technology Certificate
**Total Credits**
13

| Semester | Term | Term Credits |
|---|---|---|
| 1st Semester | Fall | 7 |

**Courses**
- LEX110 - Introduction to Paralegal Study

**Term Credits** 2

**Courses**
- LEX130 - Civil Injuries

**Term Credits** 3

**Courses**
- LEX280 - Ethics & Professionalism

**Term Credits** 2

| Semester | Term | Term Credits |
|---|---|---|
| 2nd Semester | Spring | 6 |

**Courses**
- LEX240 - Family Law

**Term Credits** 3

**Courses**
- LEX160 - Criminal Law & Procedure

**Term Credits** 3

## C25590AP - Information Technology Swift Programming Certificate

### Overview

**Program Code**
C25590AP

**Career Community**
STEM

**Program Length**
2 semesters

**Credential**
Certificate

### Program Outcomes

### Degree Maps

Swift Programming Certificate
**Total Credits**
12

| Semester | Term | Term Credits |
|---|---|---|
| 1st Semester | Fall | 6 |

**Courses**
- CSC118 - Swift Programming I

**Term Credits** 3

**Courses**
- CTI110 - Information Technology Foundations

**Term Credits** 3

| Semester | Term | Term Credits |
|---|---|---|
| 2nd Semester | Spring | 6 |

**Courses**
- CSC218 - Swift Programming II

**Term Credits** 3

**Courses**
- WEB151 - Mobile Application Development I

**Term Credits** 3

## C25590DP - Information Technology Database Programming Certificate

### Overview

**Program Code**
C25590DP

**Career Pathway Options**
Associate in Applied Science Degree in Computer Information Technology (Higher entrance standards required), Diploma in Computer Information Technology (Higher entrance standards required), Certificate in Computer Information Technology.

**Career Community**
STEM

**Program Length**
3 semesters

**Credential**
Certificate

## Program Outcomes

## Degree Maps

Database Programming Certificate
**Total Credits**
15

| Semester | Term | Term Credits |
|---|---|---|
| 1st Semester | Fall | 6 |

**Courses**
- CTI110 - Information Technology Foundations

**Term Credits** 3

**Courses**
- DBA110 - Database Concepts

**Term Credits** 3

| Semester | Term | Term Credits |
|---|---|---|
| 2nd Semester | Spring | 6 |

**Courses**
- CIS115 - Introduction to Programming and Logic

**Term Credits** 3

**Courses**
- DBA120 - Database Programming I

**Term Credits** 3

| Semester | Term | Term Credits |
|---|---|---|
| 3rd Semester | Summer | 3 |

**Courses**
- Programming Elective (Generic)

**Term Credits** 3

# C25590HT - Information Technology Computer Hardware Troubleshooting Repair Certificate

## Overview

**Program Code**
C25590HT

**Career Pathway Options**
Associate in Computer Information Technology or Networking Technology

**Career Community**
STEM

**Program Length**
2 semesters

**Credential**
Certificate

## Program Outcomes

## Degree Maps

Hardware/Troubleshooting Certificate
**Total Credits**
12

| Semester | Term | Term Credits |
|---|---|---|
| 1st Semester | Fall | 6 |

**Courses**
- CTS120 - Hardware/Software Support

**Term Credits** 3

**Courses**
- NOS130 - Windows Single User

**Term Credits** 3

| Semester | Term | Term Credits |
|---|---|---|
| 2nd Semester | Spring | 6 |

**Courses**
- CTI120 - Network and Security Foundations

**Term Credits** 3

**Courses**
- CSC113 - Artificial Intelligence Fundamentals

**Term Credits** 3

# C25590IC - Information Technology Internet and Computing Core-IC3 Certificate

## Overview

**Program Code**
C25590IC

**Career Pathway Options**
Associate in Applied Science Degree in Computer Associate in Applied Science Degree in Computer Information Technology (Higher entrance standards required), Diploma in Computer Information Technology (Higher entrance standards required), Certificate in Computer Information

**Career Community**
STEM

**Program Length**
2 semesters

**Credential**
Certificate

## Program Outcomes

## Degree Maps

Internet and Computing Core IC3 Certificate
**Total Credits**
12

| Semester | Term | Term Credits |
|---|---|---|
| 1st Semester | Fall | 6 |

**Courses**
- CTS120 - Hardware/Software Support

**Term Credits** 3

**Courses**
- NOS130 - Windows Single User

**Term Credits** 3

| Semester | Term | Term Credits |
|---|---|---|
| 2nd Semester | Spring | 6 |

**Courses**
- CIS110 - Introduction to Computers

**Term Credits** 3

**Courses**
- CTI120 - Network and Security Foundations

**Term Credits** 3

# C25590NI - Information Technology Network Infrastructure Certificate

## Overview

**Program Code**
C25590NI

**Career Pathway Options**
Associate in Applied Science Degree in Network Technology (Higher entrance standards required), Diploma in Network Technology (Higher entrance standards required), Certificate in Network Infrastructure.

**Career Community**
STEM

**Program Length**
2 semesters

**Credential**
Certificate

## Program Outcomes

## Degree Maps

Network Infrastructure Certificate
**Total Credits**
12

| Semester | Term | Term Credits |
|---|---|---|
| 1st Semester | Fall | 6 |

**Courses**
- CTI120 - Network and Security Foundations

**Term Credits** 3

**Courses**
- NET125 - Introduction to Networks

**Term Credits** 3

| Semester | Term | Term Credits |
|---|---|---|
| 2nd Semester | Spring | 6 |

**Courses**
- NET126 - Switching and Routing

**Term Credits** 3

**Courses**
- NET225 - Enterprise Networking

**Term Credits** 3

# C25590NO - Information Technology Network Operating System Certificate

## Overview

**Program Code**
C25590NO

**Career Pathway Options**
Associate in Applied Science Degree in Network Technology (Higher entrance standards required), Diploma in Network Technology (Higher entrance standards required), Certificate in Network Operating System.

**Career Community**
STEM

**Program Length**
2 semesters

**Credential**
Certificate

## Program Outcomes

## Degree Maps

Network Operating Systems Certificate
**Total Credits**
12

| Semester | Term | Term Credits |
|---|---|---|
| 1st Semester | Fall | 6 |

**Courses**
- NOS120 - Linux Single User

**Term Credits** 3

**Courses**
- NOS230 - Windows Administration I

**Term Credits** 3

| Semester | Term | Term Credits |
|---|---|---|
| 2nd Semester | Spring | 6 |

**Courses**
- NOS130 - Windows Single User

**Term Credits** 3

**Courses**
- NOS220 - Linux Administration I

**Term Credits** 3

## C25590P - Information Technology Coding and Programming Certificate

### Overview

**Program Code**
C25590P

**Career Pathway Options**
Information Technology Associate in Applied Science

**Career Community**
STEM

**Program Length**
2 semesters

**Credential**
Certificate

### Program Outcomes

### Degree Maps

Coding & Programming Certificate
**Total Credits**
18

| Semester | Term | Term Credits |
|---|---|---|
| 1st Semester | Fall | 9 |

**Courses**
- CSC134 - C++ Programming

**Term Credits** 3

**Courses**
- CTI110 - Information Technology Foundations

**Term Credits** 3

**Courses**
- CIS115 - Introduction to Programming and Logic

**Term Credits** 3

| Semester | Term | Term Credits |
|---|---|---|
| 2nd Semester | Spring | 9 |

**Courses**
- CSC151 - JAVA Programming

**Term Credits** 3

**Courses**
- WEB115 - Web Markup and Scripting

**Term Credits** 3

**Courses**
- DBA120 - Database Programming I

**Term Credits** 3

## C25590SE - Information Technology Network Security Certificate

### Overview

**Program Code**
C25590SE

**Career Pathway Options**
Associate in Applied Science Degree in Network Technology (Higher entrance standards required), Diploma in Network Technology (Higher entrance standards required), Certificate in Network Security.

**Career Community**
STEM

**Program Length**
2 semesters

**Credential**
Certificate

### Program Outcomes

### Degree Maps

Network Security Certificate
**Total Credits**
18

| Semester | Term | Term Credits |
|---|---|---|
| 1st Semester | Fall | 9 |

**Courses**
- CTI120 - Network and Security Foundations

**Term Credits** 3

**Courses**
- NET125 - Introduction to Networks

**Term Credits** 3

**Courses**
- SEC110 - Security Concepts

**Term Credits** 3

| Semester | Term | Term Credits |
|---|---|---|
| 2nd Semester | Spring | 6 |

**Courses**
- NET126 - Switching and Routing

**Term Credits** 3

**Courses**
- NET225 - Enterprise Networking

**Term Credits** 3

| Semester | Term | Term Credits |
|---|---|---|
| 3rd Semester | Fall | 3 |

**Courses**
- SEC160 - Security Administration I

**Term Credits** 3

## C25800 - Small Business Financial Advisor Certificate

### Overview

**Program Code**
C25800

**Career Pathway Options**
Associate in Applied Science Degree in Accounting & Finance, Diploma in Accounting & Finance (higher entrance standards required), Payroll Accounting Certificate, Small Business Financial Advisor Certificate I and II.

**Career Community**
Business Technologies

**Program Length**
2 semesters

**Credential**
Certificate

### Program Outcomes

### Degree Maps

Small Business Financial Advisor Certificate
**Total Credits**
15

| Semester | Term | Term Credits |
|---|---|---|
| 1st Semester | Fall | 7 |

**Courses**
- ACC120 - Principles of Financial Accounting

**Term Credits** 4

**Courses**
- BUS125 - Personal Finance

**Term Credits** 3

| Semester | Term | Term Credits |
|---|---|---|
| 2nd Semester | Spring | 8 |

**Courses**
- ACC121 - Principles of Managerial Accounting

**Term Credits** 4

**Courses**
- ACC140 - Payroll Accounting

**Term Credits** 2

**Courses**
- ACC150 - Accounting Software Applications

**Term Credits** 2

## C25800P0 - Payroll Accounting Certificate

### Overview

**Program Code**
C25800P0

**Career Pathway Options**
Associate in Applied Science Degree in Accounting & Finance, Diploma in Accounting & Finance (Higher entrance standards required), Income Tax Preparer Certificate, Small Business Financial Advisor Certificate I and II.

**Career Community**
Business Technologies

**Program Length**
2 semesters

**Credential**
Certificate

### Program Outcomes

### Degree Maps

Accounting and Finance, Payroll Accounting Certificate
**Total Credits**
17

| Semester | Term | Term Credits |
|---|---|---|
| 1st Semester | Fall | 10 |

**Courses**
- ACC120 - Principles of Financial Accounting

**Term Credits** 4

**Courses**
- BUS125 - Personal Finance

**Term Credits** 3

**Courses**
- CIS110 - Introduction to Computers

**Term Credits** 3

| Semester | Term | Term Credits |
|---|---|---|
| 2nd Semester | Spring | 7 |

**Courses**
- ACC129 - Individual Income Taxes

**Term Credits** 3

**Courses**
- ACC140 - Payroll Accounting

**Term Credits** 2

**Courses**
- ACC150 - Accounting Software Applications

**Term Credits** 2

# C25800T0 - Income Tax Preparer Clerk Certificate

## Overview

**Program Code**
C25800T0

**Career Pathway Options**
Associate in Applied Science Degree in Accounting & Finance, Diploma in Accounting & Finance (higher entrance standards required), Payroll Accounting Certificate, Small Business Financial Advisor Certificate I and II.

**Career Community**
Business Technologies

**Program Length**
2 semesters

**Credential**
Certificate

## Program Outcomes

## Degree Maps

Accounting and Finance, Income Tax Preparer Certificate
**Total Credits**
16

| Semester | Term | Term Credits |
|---|---|---|
| 1st Semester | Fall | 10 |

**Courses**
- ACC120 - Principles of Financial Accounting

**Term Credits** 4

**Courses**
- ACC129 - Individual Income Taxes

**Term Credits** 3

**Courses**
- BUS125 - Personal Finance

**Term Credits** 3

| Semester | Term | Term Credits |
|---|---|---|
| 2nd Semester | Spring | 6 |

**Courses**
- ACC122 - Principles of Financial Accounting II

**Term Credits** 3

**Courses**
- ACC130 - Business Income Taxes

**Term Credits** 3

# C3012010 - Audio Production Certificate

## Overview

**Program Code**
C3012010

**Career Community**
Arts

**Program Length**
2 semesters

**Credential**
Certificate

## Program Outcomes

## Degree Maps

Audio Production Technology Certificate
**Total Credits**
15

| Semester | Term | Term Credits |
|---|---|---|
| 1st Semester | Fall | 7 |

**Courses**
- BPT121 - Media Speech Techniques

**Term Credits** 3

**Courses**
- BPT131 - Audio Production I

**Term Credits** 4

| Semester | Term | Term Credits |
|---|---|---|
| 2nd Semester | Spring | 8 |

**Courses**
- BPT220 - Emerging Technologies

**Term Credits** 4

**Courses**
- BPT132 - Audio Production II

**Term Credits** 4

## C3012020 - Video Production Certificate

### Overview

**Program Code**
C3012020

**Career Community**
Arts

**Program Length**
2 semesters

**Credential**
Certificate

### Program Outcomes

### Degree Maps

Video Production Technology Certificate
**Total Credits**
17

| Semester | Term | Term Credits |
|---|---|---|
| 1st Semester | Fall | 8 |

**Courses**
- BPT121 - Media Speech Techniques

**Term Credits** 3

**Courses**
- BPT231 - Video Production I

**Term Credits** 4

**Courses**
- BPT235A (Generic)

**Term Credits** 1

| Semester | Term | Term Credits |
|---|---|---|
| 2nd Semester | Spring | 9 |

**Courses**
- BPT220 - Emerging Technologies

**Term Credits** 4

**Courses**
- BPT232 - Video Production II

**Term Credits** 4

**Courses**
- BPT235B (Generic)

**Term Credits** 1

## C35100B - Air Conditioning, Heating and Refrigeration Basic Certificate

### Overview

**Program Code**
C35100B

**Career Community**
Applied Technologies

**Program Length**
3 semesters

**Credential**
Certificate

### Program Outcomes

### Degree Maps

Air Conditioning, Heating, and Refrigeration Tech Basic Certification
**Total Credits**
18

| Semester | Term | Term Credits |
|---|---|---|
| 1st Semester | Fall | 5 |

**Courses**
- AHR110 - Introduction to Refrigeration

**Term Credits** 5

| Semester | Term | Term Credits |
|---|---|---|
| 2nd Semester | Spring | 12 |

**Courses**
- AHR112 - Heating Technology

**Term Credits** 4

**Courses**
- AHR113 - Comfort Cooling

**Term Credits** 4

**Courses**
- AHR114 - Heat Pump Technology

**Term Credits** 4

| Semester | Term | Term Credits |
|---|---|---|
| 3rd Semester | Summer | 1 |

**Courses**
- AHR160 - Refrigerant Certification

**Term Credits** 1

## C35100C1 - Air Conditioning, Heating and Refrigeration Technology Core I Certificate

### Overview

**Program Code**
C35100C1

**Career Community**
Applied Technologies

**Program Length**
2 semesters

**Credential**
Certificate

### Program Outcomes

### Degree Maps

Air Conditioning, Heating, and Refrigeration Tech Core I Certificate
**Total Credits**
12

| Semester | Term | Term Credits |
|---|---|---|
| 1st Semester | Fall | 8 |

**Courses**
- AHR110 - Introduction to Refrigeration

**Term Credits** 5

**Courses**
- AHR111 - HVACR Electricity

**Term Credits** 3

| Semester | Term | Term Credits |
|---|---|---|
| 2nd Semester | Spring | 4 |

**Courses**
- AHR113 - Comfort Cooling

**Term Credits** 4

## C35100C2 - Air Conditioning, Heating and Refrigeration Core 2 Certificate

### Overview

**Program Code**
C35100C2

**Career Community**
Applied Technologies

**Program Length**
4 semesters

**Credential**
Certificate

### Program Outcomes

### Degree Maps

Air Conditioning, Heating, and Refrigeration Technology, Tech Core II Certificate
**Total Credits**
12

| Semester | Term | Term Credits |
|---|---|---|
| 1st Semester | Fall | 4 |

**Courses**
- AHR114 - Heat Pump Technology

**Term Credits** 4

| Semester | Term | Term Credits |
|---|---|---|
| 2nd Semester | Spring | 2 |

**Courses**
- AHR115 - Refrigeration Systems

**Term Credits** 2

| Semester | Term | Term Credits |
|---|---|---|
| 3rd Semester | Summer | 2 |

**Courses**
- AHR213 - HVACR Building Code

**Term Credits** 2

| Semester | Term | Term Credits |
|---|---|---|
| 4th Semester | Fall | 4 |

**Courses**
- AHR211 - Residential System Design

**Term Credits** 3

**Courses**
- WBL111 - Work-Based Learning I

**Term Credits** 1

# C35100I - Air Conditioning, Heating and Refrigeration Technology Intermediate Certificate

## Overview

**Program Code**
C35100I

**Career Community**
Applied Technologies

**Program Length**
4 semesters

**Credential**
Certificate

## Program Outcomes

## Degree Maps

Air Conditioning, Heating, and Refrigeration Technology, Intermediate Certification
**Total Credits**
18

| Semester | Term | Term Credits |
|---|---|---|
| 1st Semester | Fall | 2 |

**Courses**
- AHR115 - Refrigeration Systems

**Term Credits** 2

| Semester | Term | Term Credits |
|---|---|---|
| 2nd Semester | Spring | 9 |

**Courses**
- AHR125 - HVACR Electronics

**Term Credits** 3

**Courses**
- AHR133 - HVAC Servicing

**Term Credits** 4

**Courses**
- AHR151 - HVAC Duct Systems I

**Term Credits** 2

| Semester | Term | Term Credits |
|---|---|---|
| 3rd Semester | Summer | 6 |

**Courses**
- AHR215 - Commercial HVAC Controls

**Term Credits** 2

**Courses**
- AHR225 - Commercial System Design

**Term Credits** 3

**Courses**
- AHR180 - HVACR Customer Relations

**Term Credits** 1

| Semester | Term | Term Credits |
|---|---|---|
| 4th Semester | Fall | 1 |

**Courses**
- WBL111 - Work-Based Learning I

**Term Credits** 1

# C35130 - Electrical Systems Technology Certificate

## Overview

**Program Code**
C35130

**Career Community**
Applied Technologies

**Program Length**
2 semesters

**Credential**
Certificate

## Program Outcomes

## Degree Maps

Electrical Systems Technology Certificate
**Total Credits**
17

| Semester | Term | Term Credits |
|---|---|---|
| 1st Semester | Fall | 9 |

**Courses**
- ELC112 - DC/AC Electricity

**Term Credits** 5

**Courses**
- ELC113 - Residential Wiring

**Term Credits** 4

| Semester | Term | Term Credits |
|---|---|---|
| 2nd Semester | Spring | 8 |

**Courses**
- ELC114 - Commercial Wiring

**Term Credits** 4

## C35130P1 - Electrical Systems Tech Fundamentals Certificate (HCI)

### Overview

**Program Code**
C35130P1

**Credential**
Certificate

## C35130P2 - Advanced Electrical Systems Technology Certificate (HCI)

### Overview

**Program Code**
C35130P2

**Credential**
Certificate

## C35130P3 - Electrical Systems Tech

### Overview

**Program Code**
C35130P3

**Credential**
Certificate

## C35130RE - Electrical Systems Technology Residential Electrical Certificate

### Overview

**Program Code**
C35130RE

**Career Community**
Applied Technologies

**Program Length**
3 semesters

**Credential**
Certificate

### Program Outcomes

### Degree Maps

Residential Electrical Certificate
**Total Credits**
14

| Semester | Term | Term Credits |
|---|---|---|
| 1st Semester | Fall | 6 |

**Courses**
- BPR130 - Print Reading-Construction

**Term Credits** 3

**Courses**
- CST131 - OSHA/Safety/Certification

**Term Credits** 3

| Semester | Term | Term Credits |
|---|---|---|
| 2nd Semester | Spring | 4 |

**Courses**
- ELC113 - Residential Wiring

**Term Credits** 4

| Semester | Term | Term Credits |
|---|---|---|
| 3rd Semester | Fall | 4 |

**Courses**
- ELC122 - Advanced Residential Wiring

**Term Credits** 4

## C35140 - Building Construction Technology Certificate

### Overview

**Program Code**
C35140

**Career Community**
Applied Technologies

**Program Length**
3 semesters

**Credential**
Certificate

### Program Outcomes

### Degree Maps

Building Construction Technology Diploma
**Total Credits**
15

| Semester | Term | Term Credits |
|---|---|---|
| 1st Semester | Fall | 7 |

**Courses**
- CST111 - Construction I

**Term Credits** 4

**Courses**
- CST131 - OSHA/Safety/Certification

**Term Credits** 3

| Semester | Term | Term Credits |
|---|---|---|
| 2nd Semester | Spring | 4 |

**Courses**
- CST112 - Construction II

**Term Credits** 4

| Semester | Term | Term Credits |
|---|---|---|
| 3rd Semester | Summer | 4 |

**Courses**
- CST113 - Construction III

**Term Credits** 4

## C35140CE - Building Construction Electrical Certificate

### Overview

**Program Code**
C35140CE

**Career Community**
Applied Technologies

**Program Length**
1 semester

**Credential**
Certificate

### Program Outcomes

### Degree Maps

Construction Electrical Technology Certificate
**Total Credits**
14

| Semester | Term | Term Credits |
|---|---|---|
| 1st Semester | Fall | 14 |

**Courses**
- BPR130 - Print Reading-Construction

**Term Credits** 3

**Courses**
- CST111 - Construction I

**Term Credits** 4

**Courses**
- CST131 - OSHA/Safety/Certification

**Term Credits** 3

**Courses**
- ELC113 - Residential Wiring

**Term Credits** 4

## C35180P1 - Carpentry and Construction Skills Certificate (HCI)

### Overview

**Program Code**
C35180P1

**Career Pathway Options**
Diploma in Carpentry (Higher entrance standards required); Certificate in Carpentry

**Career Community**
Applied Technologies

**Program Length**
1 semester

**Credential**
Certificate

### Program Outcomes

### Degree Maps

Certificate in Carpentry and Construction Skills (HCI)
**Total Credits**
18

| Semester | Term | Term Credits |
|---|---|---|
| 1st Semester | - | 18 |

**Courses**
- BPR130 - Print Reading-Construction

**Term Credits** 3

**Courses**
- CAR111 - Carpentry I

**Term Credits** 8

**Courses**
- CAR114 - Residential Building Codes

**Term Credits** 3

**Courses**
- CAR115 - Residential Planning/Estimating

**Term Credits** 3

**Courses**
- ISC110 - Workplace Safety

**Term Credits** 1

# C35180P2 - Advanced Carpentry Certificate (HCI)

## Overview

**Program Code**
C35180P2

**Career Pathway Options**
Diploma in Carpentry (Higher entrance standards required); Certificate in Carpentry

**Career Community**
Applied Technologies

**Program Length**
1 semester

**Credential**
Certificate

## Program Outcomes

## Degree Maps

Advanced Carpentry Certificate (Prison)
**Total Credits**
14

| Semester | Term | Term Credits |
|---|---|---|
| 1st Semester | - | 14 |

**Courses**
- CAR112 - Carpentry II

**Term Credits** 8

**Courses**
- CAR113 - Carpentry III

**Term Credits** 6

# C35220 - Electrical Technology Certificate

## Overview

**Program Code**
C35220

**Credential**
Certificate

# C35220P1 - Fundamentals of Electrical Technology Certificate (HCI)

## Overview

**Program Code**
C35220P1

**Credential**
Certificate

## Degree Maps

Fundamentals of Electrical Technology Certificate (HCI)
**Total Credits**
13

| Semester | Term | Term Credits |
|---|---|---|
| 1st Semester | - | 13 |

**Courses**
- ELC112 - DC/AC Electricity

**Term Credits** 5

**Courses**
- ELC113 - Residential Wiring

**Term Credits** 4

**Courses**
- ELC125 - Diagrams and Schematics

**Term Credits** 2

**Courses**
- ELC118 - National Electrical Code

**Term Credits** 2

# C35280P1 - Masonry Fundamentals Certificate (HCI)

## Overview

**Program Code**
C35280P1

**Career Pathway Options**
Certificate in Masonry

**Career Community**
Applied Technologies

**Program Length**
1 semester

**Credential**
Certificate

## Program Outcomes

## Degree Maps

Masonry Fundamentals (HCI)
**Total Credits**
14

| Semester | Term | Term Credits |
|---|---|---|
| 1st Semester | - | 14 |

**Courses**
- MAS110 - Masonry I

**Term Credits** 10

**Courses**
- BPR130 - Print Reading-Construction

**Term Credits** 3

**Courses**
- ISC110 - Workplace Safety

**Term Credits** 1

## C35280P2 - Advanced Masonry Skills Certificate (HCI)

### Overview

**Program Code**
C35280P2

**Career Pathway Options**
Certificate in Masonry

**Career Community**
Applied Technologies

**Program Length**
1 semester

**Credential**
Certificate

### Program Outcomes

### Degree Maps

Advanced Masonry Skills (HCI)
**Total Credits**
18

| Semester | Term | Term Credits |
|---|---|---|
| 1st Semester | - | 18 |

**Courses**
- MAS120 - Masonry II

**Term Credits** 10

**Courses**
- MAS130 - Masonry III

**Term Credits** 8

## C40200 - Electronics Engineering Technology Certificate

### Overview

**Program Code**
C40200

**Career Pathway Options**
Associate in Applied Science Degree in Electronics Engineering Technology, Certificate in Electronics Technology

**Career Community**
STEM

**Program Length**
3 semesters

**Credential**
Certificate

### Program Outcomes

### Degree Maps

Electronics Technology Certificate
**Total Credits**
17

| Semester | Term | Term Credits |
|---|---|---|
| 1st Semester | Fall | 9 |

**Courses**
- EGR131 - Introduction to Electronics Technology

**Term Credits** 2

**Courses**
- ELC131 - Circuit Analysis I

**Term Credits** 4

**Courses**
- MAT121 - Algebra/Trigonometry I
  **OR**
- MAT171 - Precalculus Algebra

**Term Credits** 3

| Semester | Term | Term Credits |
|---|---|---|
| 2nd Semester | Spring | 4 |

**Courses**
- ELN131 - Analog Electronics I

**Term Credits** 4

| Semester | Term | Term Credits |
|---|---|---|
| 3rd Semester | Summer | 4 |

**Courses**
- ELN132 - Analog Electronics II

**Term Credits** 4

# C40320 - Mechanical Engineering Certificate

## Overview

**Program Code**
C40320

**Career Community**
STEM

**Program Length**
3 semesters

**Credential**
Certificate

## Program Outcomes

## Degree Maps

Mechanical Engineering Technology Certificate
**Total Credits**
16

| Semester | Term | Term Credits |
|---|---|---|
| 1st Semester | Fall | 3 |

**Courses**
- DFT154 - Introduction to Solid Modeling

**Term Credits** 3

| Semester | Term | Term Credits |
|---|---|---|
| 2nd Semester | Spring | 7 |

**Courses**
- DFT151 - CAD I

**Term Credits** 3

**Courses**
- DDF211 - Design Process I

**Term Credits** 4

| Semester | Term | Term Credits |
|---|---|---|
| 3rd Semester | Fall | 6 |

**Courses**
- DFT152 - CAD II

**Term Credits** 3

**Courses**
- MEC111 - Machine Processes I

**Term Credits** 3

# C40320EG - Mechanical Engineering Technology Graphics Certificate

## Overview

**Program Code**
C40320EG

**Credential**
Certificate

## Degree Maps

Mechanical Engineering Technology Graphics Certificate
**Total Credits**
13

| Semester | Term | Term Credits |
|---|---|---|
| 1st Semester | Fall | 3 |

**Courses**
- DFT154 - Introduction to Solid Modeling

**Term Credits** 3

| Semester | Term | Term Credits |
|---|---|---|
| 2nd Semester | Spring | 7 |

**Courses**
- DDF211 - Design Process I

**Term Credits** 4

**Courses**
- DFT254 - Intermediate Solid Modeling & Rendering

**Term Credits** 3

| Semester | Term | Term Credits |
|---|---|---|
| 3rd Semester | Spring | 3 |

**Courses**
- DFT153 - CAD III

**Term Credits** 3

# C45360DA - Health Information Technology Data Analytics Certificate

## Overview

**Program Code**
C45360DA

**Career Pathway Options**
Associate in Applied Science Degree in Health Information Technology, Diploma, Certificate(s)

**Career Community**
Health Sciences

**Program Length**
2 semesters

**Credential**
Certificate

## Degree Maps

Health Information Technology, Certificate in Data Analytics

**Total Credits**

16

| Semester | Term | Term Credits |
|---|---|---|
| 1st Semester | Fall | 10 |

**Courses**

- MAT152 - Statistical Methods I

**Term Credits** 4

**Courses**

- HIT110 - Introduction to Healthcare and HIM Management

**Term Credits** 3

**Courses**

- HIT114 - Health Data Systems and Standards

**Term Credits** 3

| Semester | Term | Term Credits |
|---|---|---|
| 2nd Semester | Spring | 6 |

**Courses**

- HIT225 - Healthcare Informatics

**Term Credits** 3

**Courses**

- HIT217 - Quality & Data Analysis

**Term Credits** 3

## Admissions Requirements

**Admissions Requirements**
**Limited Enrollment Curriculum:**

The Health Information Technology program is a limited enrollment curriculum. Program applicants are accepted in the Fall and Spring semesters once minimum admission criteria are met. Admission criteria for the Health Information Technology program C45360DA are reviewed annually and are subject to change.

**A. PROGRAM SPECIFIC ENTRANCE STANDARDS:**

**Admissions Process**

The student may apply to the Health Information Technology program once minimum admissions criteria are met. This includes the following:

- Minimum 2.0 GPA
- All transcripts received - high school and past colleges
- Eligible to take MAT without a co-requisite.

**Placement Test Scores**

Students must be eligible to take their gateway Math course in order to be eligible to apply. This can be achieved through a High School Unweighted GPA of 2.6 or higher or by presenting acceptable test scores such as SAT, ACT, Accuplacer,\, or other acceptable scores

Students must be able to be placed into MAT 152. Students who have an unweighted high school GPA of 2.8 or higher, have met Multiple Measures for Placement or who have earned appropriate transfer credit in English, Math, or developmental courses with a C, P2 for English, or P2 for Math, or higher may be exempt from placement testing.

**GPA**

Students must be in good academic standing upon applying to health science programs. Good academic standing is defined as having a 2.0 GPA in the most recent semester attempted as well as maintaining a 2.0 cumulative GPA. These GPA requirements must be maintained at the time of entering the program from a secondary or post-secondary institution.

**The Test of English as a Foreign Language (TOEFL)**

TOEFL scores are required for any naturalized or non-US citizens who speak English as their second language. This test provides evidence of adequate proficiency in the English language. All test scores must be less than five years old. The minimum acceptable TOEFL scores are based on the following formats: TOEFL iBT Total Score - **80** or higher

TOEFL Essential Overall Band Score: **8** or higher. The test is offered at multiple testing sites nationally or can be taken online and is at the student's expense.

**B. REQUIREMENTS AFTER ACCEPTANCE:**

**Liability/Malpractice Insurance**

Malpractice insurance is required for health sciences students and is assessed as a student fee.

**Transportation/Additional Class/Course Materials**

Health Sciences students are responsible for their own transportation to off-campus clinical/learning sites. Materials and textbooks will be required and are purchased at student's expense.

**Technical Standards**

Please refer to the Health Information Technology program physical requirements and technical standards.

**Academic Standards**

Upon official acceptance, Health Sciences students are required to maintain the necessary GPA requirements for entry. Students cannot enter a Health Sciences program while on academic suspension. Health Sciences students must achieve a grade of "C" or higher in their Health Science courses. Students may withdraw or be withdrawn from a Health Sciences course. However, the student will not be allowed to matriculate through their program of study if they do not achieve a grade of "C" or better. Students completing readmission must meet with the Education Navigator to review their file.

**Program Specific Academic Standards:**

See additional Program Specific Standards in the Health Information Technology Program Guide and specific Health Information Technology course syllabus.

Health Information Technology students must maintain an overall and semester GPA 2.0 or better, and must earn a grade of "C" or better in all courses required by the Health Information Technology curriculum in order to graduate. Health Information Technology and progressive related courses must be taken in succession as they appear in the curriculum guide curriculum guide. Health Information Technology students must adhere to the other policies set forth in the Health Information Technology Program Guide.

**C. RE-ADMISSION OR TRANSFER INTO THE HEALTH INFORMATION TECHNOLOGY PROGRAM:**

The student must qualify under the admission criteria in effect at time of readmission or transfer. A student may be required to re-enter a Health Information Technology course earlier in the curriculum sequence if the student is lacking major content as evaluated by the Program Director. All Health Information Technology courses completed more than three years prior to re-admission or transfer must either be challenged by exam, including passing an

assessment of all skills and/or competencies covered in that course, or the course must be repeated. Withdrawal or academic failure within the Health Information Technology program will require the student to reapply as a new student. Advanced placement is dependent upon space availability.

The Health Information Technology Program Director will evaluate transferability of all Health Information Technology courses. Transfer courses must be equivalent to courses required at the receiving college in both theory and clinical experiences. The student must provide copies of course syllabi and outlines for those Health Information Technology courses taken to the Program Director. Students lacking essential content may be required to audit a portion of a course, challenge the content, demonstrate skills or repeat the course as deemed necessary. The final decision for transfer credit for Health Information Technology courses is determined by the Health Information Technology Program Director.

Applicants must submit a letter explaining the circumstances of any previous exit from any health sciences program. The letter must be sent from the previous Program Director. CCCC's Health Information Technology Program Director and Vice President of Student Services must approve students who were dismissed, expelled, or suspended for any reason. Students who withhold previous exit information may be dismissed from the program. A remediation plan may be required.

# C45360ER - Health Information Technology Electronic Health Records Certificate

## Overview

**Program Code**
C45360ER

**Career Pathway Options**
Associate in Applied Science Degree in Health Information Technology, Diploma, Certificate(s)

**Career Community**
Health Sciences

**Program Length**
2 semesters

**Credential**
Certificate

## Program Outcomes

## Degree Maps

Health Information Technology, Certificate in Electronic Health Records
**Total Credits**
16

| Semester | Term | Term Credits |
|---|---|---|
| 1st Semester | Fall | 9 |

**Courses**
- CIS110 - Introduction to Computers

**Term Credits** 3

**Courses**
- HIT110 - Introduction to Healthcare and HIM Management

**Term Credits** 3

**Courses**
- HIT114 - Health Data Systems and Standards

**Term Credits** 3

| Semester | Term | Term Credits |
|---|---|---|
| 2nd Semester | Spring | 7 |

**Courses**
- HIT221 - Lifecycle of Electronic Health Record

**Term Credits** 3

**Courses**
- HIT215 - Revenue Cycle Management

**Term Credits** 2

**Courses**
- HIT220 - Electronic Health Records

**Term Credits** 2

## Admissions Requirements

**Admissions Requirements**
**Limited Enrollment Curriculum:**

The Health Information Technology program is a limited enrollment curriculum. Program applicants are accepted in the Fall and Spring semesters once minimum admission criteria are met. Admission criteria for the Health Information Technology program are reviewed annually and are subject to change.

**A. PROGRAM SPECIFIC ENTRANCE STANDARDS:**

**Admissions Process**

The student may apply to the Health Information Technology program once minimum admissions criteria are met. This includes the following:

- Minimum 2.0 GPA
- All transcripts received - high school and past colleges
- Eligible to take ENG and MAT without a co-requisite.

**Placement Test Scores**

Students must be eligible to take their gateway Math and English course in order to be eligible to apply. This can be achieved through a High School Unweighted GPA of 2.6 or higher or by presenting acceptable test scores such as SAT, ACT, Accuplacer,\, or other acceptable scores

Students must be able to be placed into ENG 111 and MAT 152. Students who have an unweighted high school GPA of 2.8 or higher, have met Multiple Measures for Placement or who have earned appropriate transfer credit in English, Math, or developmental courses with a C, P2 for English, or P2 for Math, or higher may be exempt from placement testing.

**GPA**

Students must be in good academic standing upon applying to health science programs. Good academic standing is defined as having a 2.0 GPA in the most recent semester attempted as well as maintaining a 2.0 cumulative GPA. These GPA requirements must be maintained at the time of entering the program from a secondary or post-secondary institution.

**The Test of English as a Foreign Language (TOEFL)**

TOEFL scores are required for any naturalized or non-US citizens who speak English as their second language. This test provides evidence of adequate proficiency in the English language. All test scores must be less than five years old. The minimum acceptable TOEFL scores are based on the following formats: TOEFL iBT Total Score - **80** or higher

TOEFL Essential Overall Band Score: **8** or higher. The test is offered at multiple testing sites nationally or can be taken online and is at the student's expense.

**B. REQUIREMENTS AFTER ACCEPTANCE:**

**Criminal Background Check/Drug Screening**

A criminal background check and drug screening will be required for all accepted Health Sciences students. Clinical affiliates will review criminal background reports and drug screenings of students and reserve the right to accept or deny any students based on their consideration of these reports. Negative reports and/or failed screenings can preclude a student from attending the clinical portion of their prescribed program and thus, will result in the student's exit from the program. Students are subject to criminal background check and drug screening at any time during a clinical rotation. Clinical agencies reserve the right to require additional background checks and drug screens.

**Medical Forms/Immunizations**

Applicants are required to submit a completed college approved student medical health form to the required document tracking system by the assigned date. The student medical form must include satisfactory health history, physical examination, and immunization report. Failure to submit the required information by the assigned date will result in loss of Health Information Technology admission status and class space will be assigned to another applicant.

**Liability/Malpractice Insurance**

Malpractice insurance is required for health sciences students and is assessed as a student fee.

**Transportation/Additional Class/Course Materials**

Health Sciences students are responsible for their own transportation to off-campus clinical/learning sites. Materials and textbooks will be required and are purchased at student's expense.

**Technical Standards**

Please refer to the Health Information Technology program physical requirements and technical standards.

**Academic Standards**

Upon official acceptance, Health Sciences students are required to maintain the necessary GPA requirements for entry. Students cannot enter a Health Sciences program while on academic suspension. Health Sciences students must achieve a grade of "C" or higher in their Health Science courses. Students may withdraw or be withdrawn from a Health Sciences course. However, the student will not be allowed to matriculate through their program of study if they do not achieve a grade of "C" or better. Students completing readmission must meet with the Education Navigator to review their file.

**Program Specific Academic Standards:**

See additional Program Specific Standards in the Health Information Technology Program Guide and specific Health Information Technology course syllabus.

Health Information Technology students must maintain an overall and semester GPA 2.0 or better, and must earn a grade of "C" or better in all courses required by the Health Information Technology curriculum in order to graduate. Health Information Technology and progressive related courses must be taken in succession as they appear in the eurriculum guide curriculum guide. Health Information Technology students must adhere to the other policies set forth in the Health Information Technology Program Guide.

**C. RE-ADMISSION OR TRANSFER INTO THE HEALTH INFORMATION TECHNOLOGY PROGRAM:**

The student must qualify under the admission criteria in effect at time of readmission or transfer. A student may be required to re-enter a Health Information Technology course earlier in the curriculum sequence if the student is lacking major content as evaluated by the Program Director. All Health Information Technology courses completed more than three years prior to re-admission or transfer must either be challenged by exam, including passing an assessment of all skills and/or competencies covered in that course, or the course must be repeated. Withdrawal or academic failure within the Health Information Technology program will require the student to reapply as a new student. Advanced placement is dependent upon space availability.

The Health Information Technology Program Director will evaluate transferability of all Health Information Technology courses. Transfer courses must be equivalent to courses required at the receiving college in both theory and clinical experiences. The student must provide copies of course syllabi and outlines for those Health Information Technology courses taken to the Program Director. Students lacking essential content may be required to audit a portion of a course, challenge the content, demonstrate skills or repeat the course as deemed necessary. The final decision for transfer credit for Health Information Technology courses is determined by the Health Information Technology Program Director.

Applicants must submit a letter explaining the circumstances of any previous exit from any health sciences program. The letter must be sent from the previous Program Director. CCCC's Health Information Technology Program Director and Vice President of Student Services must approve students who were dismissed, expelled, or suspended for any reason. Students who withhold previous exit information may be dismissed from the program. A remediation plan may be required.

# C45360PA - Health Information Technology Patient Access Certificate

## Overview

**Program Code**
C45360PA

**Career Pathway Options**
Associate in Applied Science Degree in Health Information Technology, Diploma, Certificate(s)

**Career Community**
Health Sciences

**Program Length**
2 semesters

**Credential**
Certificate

## Program Outcomes

## Degree Maps

Patient Access Specialist Certificate
**Total Credits**
17

| Semester | Term | Term Credits |
|---|---|---|
| 1st Semester | Fall | 8 |

**Courses**

- HIT215 - Revenue Cycle Management

**Term Credits** 2

**Courses**
- HIT110 - Introduction to Healthcare and HIM Management

**Term Credits** 3

**Courses**
- MED121 - Medical Terminology I

**Term Credits** 3

| Semester | Term | Term Credits |
|---|---|---|
| 2nd Semester | Spring | 9 |

**Courses**
- MED122 - Medical Terminology II

**Term Credits** 3

**Courses**
- HIT112 - Health Law and Ethics

**Term Credits** 3

**Courses**
- HIT221 - Lifecycle of Electronic Health Record

**Term Credits** 3

## Admissions Requirements

**Admissions Requirements**
All high school and college transcripts must be received.

# C45630 - Health and Fitness Science Certificate

## Overview

**Program Code**
C45630

**Program Description**
The Health and Fitness Science program is designed to provide students with the knowledge and skills necessary for employment in the fitness and exercise industry.

Students will be trained in exercise science and be able to administer basic fitness tests and health risk appraisals, teach specific exercise and fitness classes and provide instruction in the proper use of exercise equipment and facilities.

Graduates should qualify for employment opportunities in commercial fitness clubs, YMCA's/YWCA's, wellness programs in business and industry, Parks & Recreation Departments and other organizations implementing exercise & fitness programs.

**Career Pathway Options**
Associate in Applied Science in Health and Fitness Science; Diploma in Health and Fitness Science; Certificate in Health and Fitness Science

**Career Community**
Health Sciences

**Program Length**
2 semesters

**Credential**
Certificate

## Program Outcomes

## Degree Maps

Health & Fitness Science, Certificate

**Total Credits**
17

| Semester | Term | Term Credits |
|---|---|---|
| 1st Semester | Fall | 10 |

**Courses**
- HEA112 - First Aid & CPR

**Term Credits** 2

**Courses**
- HFS110 - Exercise Science

**Term Credits** 4

**Courses**
- HFS111 - Fitness & Exercise Testing I

**Term Credits** 4

| Semester | Term | Term Credits |
|---|---|---|
| 2nd Semester | Spring | 7 |

**Courses**
- HFS116 - Prevention & Care of Exercise Injuries

**Term Credits** 3

**Courses**
- HFS210 - Personal Training

**Term Credits** 3

**Courses**
- PED117 - Weight Training I

**Term Credits** 1

# C50210 - Computer-Integrated Machining Certificate

## Overview

**Program Code**
C50210

**Career Pathway Options**
Associate in Applied Science in Computer-Integrated Machining with an Emphasis in Tool, Die and Mold Making (Higher entrance standards required); Diploma Computer Integrated-Machining (Higher entrance standards required); Certificate in Computer-Integrated Machining.

**Career Community**
Applied Technologies

**Program Length**
2 semesters

**Credential**
Certificate

## Program Outcomes

## Degree Maps

Computer-Integrated Machining Certificate
**Total Credits**
18

| Semester | Term | Term Credits |
|---|---|---|
| 1st Semester | Fall | 14 |

**Courses**
- BPR111 - Print Reading

**Term Credits** 2

**Courses**
- MAC111 - Machining Technology I

**Term Credits** 6

**Courses**
- MAC171 - Measure/Material and Safety

**Term Credits** 1

**Courses**
- MAT110 - Mathematical Measurement and Literacy

**OR**
- MAC152 - Advanced Machining Calculations

**Term Credits** 3

**Courses**
- MEC142 - Physical Metallurgy

**Term Credits** 2

| Semester | Term | Term Credits |
|---|---|---|
| 2nd Semester | Spring | 4 |

**Courses**
- BPR121 - Blueprint Reading-Mechanical

**Term Credits** 2

**Courses**
- MAC124 - CNC Milling

**Term Credits** 2

# C50210DM - Computer-Integrated Machining Die & Mold Certificate

## Overview

**Program Code**
C50210DM

**Credential**
Certificate

## Degree Maps

Computer-Integrated Machining Die & Mold Certificate
**Total Credits**
16

| Semester | Term | Term Credits |
|---|---|---|
| 1st Semester | Fall | 4 |

**Courses**
- MAC245 - Mold Construction I

**Term Credits** 4

| Semester | Term | Term Credits |
|---|---|---|
| 2nd Semester | Spring | 8 |

**Courses**
- MAC243 - Die Making I

**Term Credits** 4

**Courses**
- MAC246 - Mold Construction II

**Term Credits** 4

| Semester | Term | Term Credits |
|---|---|---|
| 3rd Semester | Summer | 4 |

**Courses**
- MAC244 - Die Making II

**Term Credits** 4

# C5024010 - Industrial Systems Technology Electrical Controls Certificate

## Overview

**Program Code**
C5024010

**Career Pathway Options**
Associate in Applied Science in Industrial Systems Technology (Higher entrance standards required); Diploma in Industrial Systems Technology (Higher entrance standards required); Certificate in Electrical Controls

**Career Community**
Applied Technologies

**Program Length**
4 semesters

**Credential**
Certificate

## Program Outcomes

## Degree Maps

Industrial Systems Technology, Electrical Controls Certificate
**Total Credits**
16

| Semester | Term | Term Credits |
|---|---|---|
| 1st Semester | Fall | 5 |

**Courses**
- ELC112 - DC/AC Electricity

**Term Credits** 5

| Semester | Term | Term Credits |
|---|---|---|
| 2nd Semester | Spring | 6 |

**Courses**
- ELC128 - Introduction to Programmable Logic Controller

**Term Credits** 3

**Courses**
- ELN231 - Industrial Controls

**Term Credits** 3

| Semester | Term | Term Credits |
|---|---|---|
| 3rd Semester | Summer | 1 |

**Courses**
- ISC110 - Workplace Safety

**Term Credits** 1

| Semester | Term | Term Credits |
|---|---|---|
| 4th Semester | Fall | 4 |

**Courses**
- ELC117 - Motors and Controls

**Term Credits** 4

# C5024020 - Industrial Systems Technology Industrial Hydraulics Certificate

## Overview

**Program Code**
C5024020

**Career Pathway Options**
Associate in Applied Science in Industrial Systems Technology (Higher entrance standards required); Diploma in Industrial Systems Maintenance Technology (Higher entrance standards required); Certificate in Industrial Hydraulics

**Career Community**
Applied Technologies

**Program Length**
4 semesters

**Credential**
Certificate

## Program Outcomes

## Degree Maps

Industrial Systems Technology, Industrial Hydraulics Certificate
**Total Credits**
17

| Semester | Term | Term Credits |
|---|---|---|
| 1st Semester | Fall | 4 |

**Courses**
- BPR111 - Print Reading

**Term Credits** 2

**Courses**
- MNT110 - Introduction to Maintenance Procedures

**Term Credits** 2

| Semester | Term | Term Credits |
|---|---|---|
| 2nd Semester | Spring | 7 |

**Courses**
- MNT111 - Maintenance Practices

**Term Credits** 3

**Courses**
- PHY121 - Applied Physics I

**OR**
- MAT110 - Mathematical Measurement and Literacy

**Term Credits** 4

| Semester | Term | Term Credits |
|---|---|---|
| 3rd Semester | Summer | 4 |

**Courses**
- ISC110 - Workplace Safety

**Term Credits** 1

**Courses**
- HYD110 - Hydraulics/Pneumatics I

**Term Credits** 3

| Semester | Term | Term Credits |
|---|---|---|
| 4th Semester | Fall | 2 |

**Courses**
- HYD121 - Hydraulics/Pneumatics II

**Term Credits** 2

# C5024030 - Industrial Systems Technology Programmable Logic Certificate

## Overview

**Program Code**
C5024030

**Career Pathway Options**
Associate in Applied Science in Industrial Systems Technology (Higher entrance standards required); Diploma in Industrial Systems Technology (Higher entrance standards required); Certificate in Programmable Logic Controllers

**Career Community**
Applied Technologies

**Program Length**
4 semesters

**Credential**
Certificate

## Program Outcomes

## Degree Maps

Industrial Systems Technology, Programmable Logic Controllers
**Total Credits**
17

| Semester | Term | Term Credits |
|---|---|---|
| 1st Semester | Fall | 5 |

**Courses**
- ELC112 - DC/AC Electricity

**Term Credits** 5

| Semester | Term | Term Credits |
|---|---|---|
| 2nd Semester | Spring | 4 |

**Courses**
- ELC128 - Introduction to Programmable Logic Controller

**Term Credits** 3

**Courses**
- ISC110 - Workplace Safety

**Term Credits** 1

| Semester | Term | Term Credits |
|---|---|---|
| 3rd Semester | Summer | 4 |

**Courses**
- ELN260 - Programmable Logic Controllers

**Term Credits** 4

| Semester | Term | Term Credits |
|---|---|---|
| 4th Semester | Fall | 4 |

**Courses**
- ELC228 - Programmable Logic Controllers Applications

**Term Credits** 4

# C5024050 - Industrial System Technology Mechanical Maintenance Cert.

## Overview

**Program Code**
C5024050

**Career Pathway Options**
Associate in Applied Science in Industrial Systems Technology (Higher entrance standards required); Diploma in Industrial Systems Technology (Higher entrance standards required); Certificate in Mechanical Maintenance

**Career Community**
Applied Technologies

**Program Length**
2 semesters

**Credential**
Certificate

## Program Outcomes

## Degree Maps

Industrial Systems Technology, Mechanical Maintenance Certificate
**Total Credits**
18

| Semester | Term | Term Credits |
|---|---|---|
| 1st Semester | Fall | 10 |

**Courses**
- ELC112 - DC/AC Electricity

**Term Credits** 5

**Courses**
- MEC111 - Machine Processes I

**Term Credits** 3

**Courses**
- MNT110 - Introduction to Maintenance Procedures

**Term Credits** 2

| Semester | Term | Term Credits |
|---|---|---|
| 2nd Semester | Spring | 8 |

**Courses**
- BPR111 - Print Reading

**Term Credits** 2

**Courses**
- ISC110 - Workplace Safety

**Term Credits** 1

**Courses**
- MNT111 - Maintenance Practices

**Term Credits** 3

**Courses**
- WLD112 - Basic Welding Processes

**Term Credits** 2

**Courses**
- ISC132 - Manufacturing Quality Control

**Term Credits** 3

## C5024060 - Industrial Systems Technology Foundations of Advanced Manufacturing Certificate

### Overview

**Program Code**
C5024060

**Career Pathway Options**
Associate in Applied Science in Industrial Systems Technology (Higher entrance standards required); Diploma in Industrial Systems Technology (Higher entrance standards required); Certificate in Foundations of Advanced Manufacturing

**Career Community**
Applied Technologies

**Program Length**
2 semesters

**Credential**
Certificate

### Program Outcomes

### Degree Maps

Foundations of Advanced Manufacturing Certificate
**Total Credits**
12

| Semester | Term | Term Credits |
|---|---|---|
| 1st Semester | Fall | 6 |

**Courses**
- MNT110 - Introduction to Maintenance Procedures

**Term Credits** 2

**Courses**
- ISC112 - Industrial Safety

**Term Credits** 2

**Courses**
- BPR111 - Print Reading

**Term Credits** 2

| Semester | Term | Term Credits |
|---|---|---|
| 2nd Semester | Spring | 6 |

**Courses**
- ATR112 - Introduction to Automation

**Term Credits** 3

## C50300 - Machining Technology Certificate

### Overview

**Program Code**
C50300

**Credential**
Certificate

## C50420 - Welding Technology Certificate

### Overview

**Program Code**
C50420

**Career Pathway Options**
Diploma in Welding Technology (Higher entrance standards required), Certificate in Welding Technology

**Career Community**
Applied Technologies

**Program Length**
2 semesters

**Credential**
Certificate

### Program Outcomes

### Degree Maps

Welding Technology Certificate
**Total Credits**
22

| Semester | Term | Term Credits |
|---|---|---|
| 1st Semester | Fall | 10 |

**Courses**
- BPR111 - Print Reading

**Term Credits** 2

**Courses**
- ISC110 - Workplace Safety

**Term Credits** 1

**Courses**
- WLD110 - Cutting Processes

**Term Credits** 2

**Courses**
- WLD115 - SMAW (Stick) Plate
  **OR**
- WLD115B - SMAW (stick) Plate

**Term Credits** 5

| Semester | Term | Term Credits |
|---|---|---|
| 2nd Semester | Spring | 8 |

**Courses**
- WLD121 - GMAW (MIG) FCAW/Plate
  **OR**
- WLD115A - SMAW (stick) Plate

**Term Credits** 4

**Courses**
- WLD131 - GTAW (TIG) Plate
  **OR**
- WLD121 - GMAW (MIG) FCAW/Plate

**Term Credits** 4

| Semester | Term | Term Credits |
|---|---|---|
| 3rd Semester | Fall | 4 |

**Courses**
- WLD131 - GTAW (TIG) Plate

**Term Credits** 4

## C50420C - Welding Career Certificate

### Overview

**Program Code**
C50420C

**Career Community**
Applied Technologies

**Program Length**
2 semesters

**Credential**
Certificate

### Program Outcomes

### Degree Maps

Welding Career Technology Certificate
**Total Credits**
13

| Semester | Term | Term Credits |
|---|---|---|
| 1st Semester | Fall | 5 |

**Courses**
- BPR111 - Print Reading

**Term Credits** 2

**Courses**
- ISC110 - Workplace Safety

**Term Credits** 1

**Courses**
- WLD110 - Cutting Processes

**Term Credits** 2

| Semester | Term | Term Credits |
|---|---|---|
| 2nd Semester | Spring | 8 |

**Courses**
- WLD121 - GMAW (MIG) FCAW/Plate

**Term Credits** 4

**Courses**
- WLD131 - GTAW (TIG) Plate

**Term Credits** 4

## C50420P1 - Welding Fundamentals Certificate (HCI)

### Overview

**Program Code**
C50420P1

**Career Pathway Options**
Certificate in Welding Technology

**Career Community**
Applied Technologies

**Program Length**
1 semester

**Credential**
Certificate

### Program Outcomes

### Degree Maps

Certificate in Welding Fundamentals Degree Map
**Total Credits**
15

| Semester | Term | Term Credits |
|---|---|---|
| 1st Semester | - | 15 |

**Courses**
- WLD110 - Cutting Processes

**Term Credits** 2

**Courses**
- WLD115 - SMAW (Stick) Plate

**Term Credits** 5

**Courses**
- WLD141 - Symbols and Specifications

**Term Credits** 3

**Courses**
- WLD116 - SMAW (stick) Plate/Pipe

**Term Credits** 4

**Courses**
- ISC110 - Workplace Safety

**Term Credits** 1

Welding Fundamentals
**Total Credits**
15

| Semester | Term | Term Credits |
|---|---|---|
| 1st Semester | - | 15 |

**Courses**
- WLD110 - Cutting Processes

**Term Credits** 2

**Courses**
- WLD115 - SMAW (Stick) Plate

**Term Credits** 5

**Courses**
- WLD116 - SMAW (stick) Plate/Pipe

**Term Credits** 4

**Courses**
- WLD141 - Symbols and Specifications

**Term Credits** 3

**Courses**
- ISC110 - Workplace Safety

**Term Credits** 1

# C50420P2 - MIG, TIG, and Fabrication Certificate (HCI)

## Overview

**Program Code**
C50420P2

**Career Pathway Options**
Certificate in Welding Technology

**Career Community**
Applied Technologies

**Program Length**
1 semester

**Credential**
Certificate

## Program Outcomes

## Degree Maps

MIG, TIG, and Fabrication Certificate (HCI)
**Total Credits**
15

| Semester | Term | Term Credits |
|---|---|---|
| 1st Semester | - | 15 |

**Courses**
- WLD121 - GMAW (MIG) FCAW/Plate

**Term Credits** 4

**Courses**
- WLD131 - GTAW (TIG) Plate

**Term Credits** 4

**Courses**
- WLD151 - Fabrication I

**Term Credits** 4

**Courses**
- WLD262 - Inspection & Testing

**Term Credits** 3

# C50420R - Robotics Welding Certificate

## Overview

**Program Code**
C50420R

**Career Pathway Options**
Diploma in Welding Technology (Higher entrance standards required), Certificate in Welding Technology

**Career Community**
Applied Technologies

**Program Length**
3 semesters

**Credential**
Certificate

## Program Outcomes

## Degree Maps

Robotic Welding Technology Certificate

**Total Credits**

13

| Semester | Term | Term Credits |
|---|---|---|
| 1st Semester | Fall | 5 |

**Courses**

- BPR111 - Print Reading

**Term Credits** 2

**Courses**

- ISC110 - Workplace Safety

**Term Credits** 1

**Courses**

- WLD110 - Cutting Processes

**Term Credits** 2

| Semester | Term | Term Credits |
|---|---|---|
| 2nd Semester | Spring | 4 |

**Courses**

- WLD121 - GMAW (MIG) FCAW/Plate

**Term Credits** 4

| Semester | Term | Term Credits |
|---|---|---|
| 3rd Semester | Fall | 4 |

**Courses**

- WLD265 - Automated Welding/Cutting

**Term Credits** 4

# C55110 - Barbering Certificate

## Overview

**Program Code**
C55110

**Career Pathway Options**
Certificate in Barbering

**Career Community**
Professional Services

**Program Length**
4 semesters

**Credential**
Certificate

## Program Outcomes

## Degree Maps

Barbering, Certificate

**Total Credits**

41

| Semester | Term | Term Credits |
|---|---|---|
| 1st Semester | Fall | 12 |

**Courses**

- BAR111 - Barbering Concepts I

**Term Credits** 4

**Courses**

- BAR112 - Barbering Clinic I

**Term Credits** 8

| Semester | Term | Term Credits |
|---|---|---|
| 2nd Semester | Spring | 12 |

**Courses**

- BAR113 - Barbering Concepts II

**Term Credits** 4

**Courses**

- BAR114 - Barbering Clinic II

**Term Credits** 8

| Semester | Term | Term Credits |
|---|---|---|
| 3rd Semester | Summer | 8 |

**Courses**

- BAR115 - Barbering Concepts III

**Term Credits** 4

**Courses**

- BAR116 - Barbering Clinic III

**Term Credits** 4

| Semester | Term | Term Credits |
|---|---|---|
| 4th Semester | Fall | 9 |

**Courses**

- BAR117 - Barbering Concepts IV

**Term Credits** 2

**Courses**

- BAR118 - Barbering Clinic IV

**Term Credits** 7

# C55110P0 - Barbering Certificate (HCI)

## Overview

**Program Code**
C55110P0

**Career Pathway Options**
Certificate in Barbering

**Career Community**
Professional Services

**Program Length**
3 semesters

**Credential**
Certificate

## Program Outcomes

## Program of Study

**Program Length:** 3 semesters

**Course Requirements for Barbering Certificate**

**1. Major Requirements (41 SHC)** C-L-SHC

BAR 111 Barbering Concepts I 4-0-4
BAR 112 Barbering Clinic I 0-24-8
BAR 113 Barbering Concepts II 4-0-4
BAR 114 Barbering Clinic II 0-24-8
BAR 115 Barbering Concepts III 4-0-4
BAR 116 Barbering Clinic III 0-12-4
BAR 117 Barbering Concepts IV 2-0-2
BAR 118 Barbering Clinic IV 0-21-7

Total Semester Credits Required: 41

## Admissions Requirements

**Admissions Requirements**
Must process student permits at least 10 days prior to the first day of class.

# C55120 - Basic Law Enforcement Training Certificate

## Overview

**Program Code**
C55120

**Program Description**
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 alcohol beverage laws; investigative, patrol, custody, and court procedures; emergency responses; and ethics and community relations.

Students must successfully complete and pass all units of study mandated by the North Carolina Criminal Justice Education and Training Standards Commission and the North Carolina Sheriffs' Education and Training Standards Commission to receive a certificate.

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. Units of instruction include legal, patrol duties, law enforcement communication , investigation, practical application, and Sheriff specific units. After successful completion of 868 training hours, graduates receive a curriculum certificate and will be able to demonstrate competence in the topics and areas required for the state comprehensive certification examination.

**Career Pathway Options**
Certificate in Basic Law Enforcement Training

**Career Community**
Public Safety

**Program Length**
21 weeks

**Credential**
Certificate

## Program Outcomes

## Degree Maps

Basic Law Enforcement Training (Certificate)
**Total Credits**
37

| Semester | Term | Term Credits |
|---|---|---|
| 1st Semester | - | 37 |

**Courses**

- LET110 - Basic Law Enforcement Training (BLET)

**Term Credits** 37

## Admissions Requirements

**Admissions Requirements**
Program Specific Entrance Standards:

1. Must be 20 years of age prior to full admission (persons less than 20 years of age must receive permission from the N.C. Criminal Justice Education and Training Standards Commission).
2. Must have a physical examination (on state forms provided by CCCC) within one year of entrance date. The college does not schedule or pay for the exam.
3. Must be able to participate in a required program of physical activity and pass a state mandated skills test prior to course completion.
4. Must have no felony convictions previously or class B misdemeanors within the past 5 years.
5. Must have a 10th grade reading level as determined by the reading test.

# C55140 - Cosmetology Certificate

## Overview

**Program Code**
C55140

**Program Description**
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.

Career Pathway Options
Certificate Completion
Upon successfully passing the State Board exam, graduates will be issued a license to sit for the State Board of Cosmetic Arts examination.
Employment is available in beauty salons and related businesses.

**Career Community**
Professional Services

**Program Length**
3 semesters

**Credential**
Certificate

## Program Outcomes

## Degree Maps

Cosmetology Certificate
**Total Credits**
34

| Semester | Term | Term Credits |
|---|---|---|
| 1st Semester | Fall | 12 |

**Courses**
- COS111 - Cosmetology Concepts I

**Term Credits** 4

**Courses**
- COS112 - Salon I

**Term Credits** 8

| Semester | Term | Term Credits |
|---|---|---|
| 2nd Semester | Spring | 14 |

**Courses**
- COS113 - Cosmetology Concepts II

**Term Credits** 4

**Courses**
- COS114 - Salon II

**Term Credits** 8

**Courses**
- COS223 - Contemporary Hair Coloring

**Term Credits** 2

| Semester | Term | Term Credits |
|---|---|---|
| 3rd Semester | Summer | 8 |

**Courses**
- COS115 - Cosmetology Concepts III

**Term Credits** 4

**Courses**
- COS116 - Salon III

**Term Credits** 4

# C55150CF - Culinary Fundamentals Certificate

## Overview

**Program Code**
C55150CF

**Career Pathway Options**
Associate in Applied Science Degree in Culinary Arts

**Career Community**
Professional Services

**Program Length**
1 semester

**Credential**
Certificate

## Program Outcomes

## Degree Maps

Culinary Fundamentals
**Total Credits**
17

| Semester | Term | Term Credits |
|---|---|---|
| 1st Semester | Fall | 17 |

**Courses**
- CUL110 - Sanitation and Safety

**Term Credits** 2

**Courses**
- CUL140 - Culinary Skills I

**Term Credits** 5

**Courses**
- CUL160 - Baking I

**Term Credits** 3

**Courses**
- CUL240 - Culinary Skills II

**Term Credits** 5

**Courses**
- CUL140A (Generic)

**Term Credits** 1

**Courses**
- CUL240A (Generic)

**Term Credits** 1

# C55160 - Cosmetology Instructor Certificate

## Overview

**Program Code**
C55160

**Program Description**
The Cosmetology Instructor curriculum provides a course of study for learning the skills needed to teach the theory and practice of cosmetology as required by the North Carolina Board of Cosmetic Arts.

Course work includes requirements for becoming an instructor, introduction to teaching theory, methods and aids, practice teaching, and development of evaluation instruments.

Graduates of the program may be employed as cosmetology instructors in public or private education and business.

**Career Pathway Options**
Certificate in Cosmetology Instructor

**Career Community**
Professional Services

**Program Length**
2 semesters

**Credential**
Certificate

## Program Outcomes

## Degree Maps

Cosmetology Instructor Certificate
**Total Credits**
24

| Semester | Term | Term Credits |
|---|---|---|
| 1st Semester | Fall | 12 |

**Courses**
- COS271 - Instructor Concepts I

**Term Credits** 5

**Courses**
- COS272 - Instructor Practicum I

**Term Credits** 7

| Semester | Term | Term Credits |
|---|---|---|
| 2nd Semester | Spring | 12 |

**Courses**
- COS273 - Instructor Concepts II

**Term Credits** 5

**Courses**
- COS274 - Instructor Practicum II

**Term Credits** 7

# C55180T - Criminal Justice Technology Certificate

## Overview

**Program Code**
C55180T

**Career Pathway Options**
Associate in Applied Science in Criminal Justice Technology

**Career Community**
Public Safety

**Program Length**
2 semesters

**Credential**
Certificate

## Program Outcomes

## Degree Maps

Criminal Justice Technology Certificate
**Total Credits**
18

| Semester | Term | Term Credits |
|---|---|---|
| 1st Semester | Fall | 9 |

**Courses**
- CJC111 - Introduction to Criminal Justice

**Term Credits** 3

**Courses**
- CJC112 - Criminology

**Term Credits** 3

**Courses**
- CJC132 - Court Procedure & Evidence

**Term Credits** 3

| Semester | Term | Term Credits |
|---|---|---|
| 2nd Semester | Spring | 9 |

**Courses**
- CJC113 - Juvenile Justice

**Term Credits** 3

**Courses**
- CJC212 - Ethics & Community Relations

**Term Credits** 3

**Courses**
- CJC214 - Victimology

**Term Credits** 3

# C5518C - Criminal Justice Technology Forensic Science Certificate

## Overview

**Program Code**
C5518C

**Career Pathway Options**
Associate in Applied Science in Criminal Justice Technology

**Career Community**
Public Safety

**Program Length**
2 semesters

**Credential**
Certificate

## Program Outcomes

## Degree Maps

Forensic Science Certificate
**Total Credits**
16

| Semester | Term | Term Credits |
|---|---|---|
| 1st Semester | Fall | 6 |

**Courses**
- CJC144 - Crime Scene Processing

**Term Credits** 3

**Courses**
- CJC245 - Friction Ridge Analysis

**Term Credits** 3

| Semester | Term | Term Credits |
|---|---|---|
| 2nd Semester | Spring | 10 |

**Courses**
- CJC146 - Trace Evidence

**Term Credits** 3

**Courses**
- CJC221 - Investigative Principles

**Term Credits** 4

**Courses**
- CJC246 - Advanced Friction Ridge Analysis

**Term Credits** 3

# C55220FH - Early Childhood Education Family Home Certificate

## Overview

**Program Code**
C55220FH

**Program Description**
The Early Childhood Education curriculum prepares individuals to work with children from birth through eight in diverse learning environments. Students will combine learned theories with practice in actual settings with young children under the supervision of qualified teachers.

Course work includes child growth and development; physical/nutritional needs of children; care and guidance of children; and communication skills with families and children. Students will 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.

**Career Pathway Options**
Associate in Applied Science Degree in Early Childhood Education (Higher entrance standards required); Early Childhood Education Diploma (Higher entrance standards required); Family Home & Childcare Certificate

**Career Community**
Professional Services

**Program Length**
2 semesters

**Credential**
Certificate

## Program Outcomes

## Degree Maps

Family Home & Early Childcare Certificate
**Total Credits**
18 - 19

| Semester | Term | Term Credits |
|---|---|---|
| 1st Semester | Fall | 9 - 10 |

**Courses**
- EDU144 - Child Development I

**Term Credits** 3

**Courses**
- Elective (Generic)

**Term Credits** 3 - 4

**Courses**
- Elective (Generic)

**Term Credits** 3

| Semester | Term | Term Credits |
|---|---|---|
| 2nd Semester | Spring | 9 |

**Courses**
- EDU146 - Child Guidance

**Term Credits** 3

**Courses**
- EDU153 - Health, Safety and Nutrition

**Term Credits** 3

**Courses**
- Elective (Generic)

**Term Credits** 3

## Approved AAS Electives

**Approved AAS Electives (C-L-SHC)**
Electives, select from:

EDU 119 Intro to Early Child Education 4-0-4
EDU 131 Child, Family, & Community 3-0-3
EDU 145 Child Development II 3-0-3
EDU 151 Creative Activities 3-0-3
EDU 234 Infants, Toddlers, and Twos 3-0-3
EDU 252 Math and Science Activities 3-0-3
EDU 280 Literacy Experiences 3-0-3

# C55230 - Esthetics Technology Certificate

## Overview

**Program Code**
C55230

**Program Description**
The Esthetics Technology curriculum provides competency-based knowledge, scientific/artistic principles and hands-on fundamentals associated with the art of skin care. The curriculum provides a simulated salon environment which enables students to develop manipulative skills.

Course work includes instruction in all phases of professional Esthetics Technology, business/human relations, product knowledge, and other related topics.

Graduates should be prepared to take the North Carolina Cosmetology State Board Licensing Exam and upon passing be licensed and qualify for employment in beauty and cosmetic/skin care salons, as a platform artist, and in related businesses.

**Career Pathway Options**
Certificate in Esthetics

**Career Community**
Professional Services

**Program Length**
??1 or 2 semesters??

**Credential**
Certificate

## Program Outcomes

## Degree Maps

Esthetics Certificate
**Total Credits**
16

| Semester | Term | Term Credits |
|---|---|---|
| 1st Semester | Fall | 8 |

**Courses**
- COS119 - Esthetics Concepts I

**Term Credits** 2

**Courses**
- COS120 - Esthetics Salon I

**Term Credits** 6

| Semester | Term | Term Credits |
|---|---|---|
| 2nd Semester | Spring | 8 |

**Courses**
- COS125 - Esthetics Concepts II

**Term Credits** 2

**Courses**
- COS126 - Esthetics Salon II

**Term Credits** 6

## Limited Enrollment Program Information

The CCCC Esthetics program accepts 20 full-time and 15 part-time students per year. Learn more about the admissions process with this self-paced Certificate in Esthetics information session.

Program Specific Entrance Standards:

A student can apply to the Certificate of Esthetics program once eligibility requirements have been met. Prospective applicants are required to complete the information session as well as contract the Education Navigator prior to developing a plan for completing these requirements. Students also have the ability to gain additional points through the competitive process.

The Education Navigator will review each applicant's progress, provide further guidance, and allow access to the Certificate of Esthetics Program application once all minimum admission requirements are met. Once an applicant has completed all general admissions criteria and all entrance requirements, they must submit a completed Certificate in Esthetics Application. Applicants who have completed the Application by the deadline will be ranked by tallied points and submitted in order of ranking.

During the initial consideration, applicants will have an opportunity to indicate first and second format option on the Certificate in Esthetics Application. If seats do not fill after the initial consideration for a specific format and after second choice candidates are considered, applicants will be admitted on a first qualified, first accepted basis.

Applicants who do not gain entry but want to gain entry in a future year, must reapply each year.

It is the applicants' responsibility to ensure that requirements are met by the established deadline.

More information can be found on the Limited Enrollment Website.

# C55250P1 - Food Service Technology Certificate 1 (HCI)

## Overview

**Program Code**
C55250P1

**Career Pathway Options**
Certificate in Foodservice

**Career Community**
Professional Services

**Program Length**
1 semester

**Credential**
Certificate

## Program Outcomes

## Degree Maps

Certificate in Foodservice Technology (HCI)
**Total Credits**
17

| Semester | Term | Term Credits |
|---|---|---|
| 1st Semester | - | 17 |

**Courses**
- FST100 - Introduction to Foodservice

**Term Credits** 3

**Courses**
- FST101 - Quantity Baking I

**Term Credits** 3

**Courses**
- FST102 - Foodservice Skills I

**Term Credits** 8

**Courses**
- FST103 - Foodservice Sanitation

**Term Credits** 2

**Courses**
- FST103A - Foodservice Sanitation Lab

**Term Credits** 1

# C55270 - Esthetics Instructor Certificate

## Overview

**Program Code**
C55270

**Program Description**
The Esthetics Instructor curriculum provides a course of study covering the skills needed to teach the theory and practices of esthetics as required by the North Carolina State Board of Cosmetology.

Course work includes all phases of esthetics theory laboratory instruction.

Graduates should be prepared to take the North Carolina Cosmetology State Board Esthetics Instructor Licensing Exam and upon passing be qualified for employment in a cosmetology or esthetics school.

**Career Pathway Options**
Certificate in Esthetics Instructor

**Career Community**
Professional Services

**Program Length**
2 semesters

**Credential**
Certificate

## Program Outcomes

## Degree Maps

Esthetics Instructor Certificate
**Total Credits**
22

| Semester | Term | Term Credits |
|---|---|---|
| 1st Semester | Fall | 11 |

**Courses**
- COS253 - Esthetics Instructional Concepts I

**Term Credits** 11

| Semester | Term | Term Credits |
|---|---|---|
| 2nd Semester | Spring | 11 |

**Courses**
- COS254 - Esthetic Instructional Concepts II

**Term Credits** 11

# C55290 - Infant/Toddler Care Certificate

## Overview

**Program Code**
C55290

**Program Description**
The Infant/Toddler Care curriculum prepares individuals to work with children from infancy to three years of age in diverse learning environments. Students will combine learned theories, competency-based knowledge, and practice in actual settings with infants and toddlers.

Course work includes infant/toddler growth and development: physical/nutritional needs of infants and toddlers; safety issues in the care of infants and toddlers; care and guidance; communication skills with families and children; design an implementation of appropriate curriculum; and other related topics.

Graduates should be prepared to plan and implement developmentally appropriate infant/toddler programs in early childhood settings. Employment opportunities

include child development and child care programs, preschools, public and private schools, recreational centers, Early Head Start Programs, and other infant/toddler programs.

**Career Pathway Options**
Associate in Applied Science Degree in Early Childhood Education (Higher entrance standards required); Early Childhood Education Diploma (Higher entrance standards required); Infant/Toddler Care Certificate

**Career Community**
Professional Services

**Program Length**
2 semesters

**Credential**
Certificate

## Program Outcomes

## Degree Maps

Infant/Toddler Care Certificate
**Total Credits**
16

| Semester | Term | Term Credits |
|---|---|---|
| 1st Semester | Fall | 10 |

**Courses**
- EDU119 - Introduction to Early Childhood Education

**Term Credits** 4

**Courses**
- EDU131 - Child, Family, and Community

**Term Credits** 3

**Courses**
- EDU144 - Child Development I

**Term Credits** 3

| Semester | Term | Term Credits |
|---|---|---|
| 2nd Semester | Spring | 6 |

**Courses**
- EDU153 - Health, Safety and Nutrition

**Term Credits** 3

**Courses**
- EDU234 - Infants, Toddlers, and Twos

**Term Credits** 3

# C55310C0 - Library and Information Technology Cataloging Certificate

## Overview

**Program Code**
C55310C0

**Program Description**
The Library and Information Technology curriculum is designed to prepare graduates for employment with organizations that use technology to process, manage, and communicate information. The objective is the development of generalists and specialist in the management of electronic library resources.

Students will complete courses designed to develop proficiency in the use of electronic resources for information retrieval, inventory control, information cataloging and classification, program promotion, circulation systems, audiovisual operations, hardware/software maintenance, problem solving and telecommunications.

Graduates should qualify for employment in a variety of positions in a library, media, learning resources, information, or instructional materials center or in any organization engaged in library-related activities.

**Credential**
Certificate

## Degree Maps

Library Cataloging Certificate
**Total Credits**
12

| Semester | Term | Term Credits |
|---|---|---|
| 1st Semester | Fall | 12 |

**Courses**
- LIB112 - Library Collection Develop/Acquisitions

**Term Credits** 3

**Courses**
- LIB113 - Library Cataloging & Classifying

**Term Credits** 3

**Courses**
- LIB213 - Cataloging Nonprint Materials

**Term Credits** 3

**Courses**
- WEB110 - Web Development Fundamentals

**Term Credits** 3

# C55310G0 - Library and Information Technology Library Basics Certificate

## Overview

**Program Code**
C55310G0

**Credential**
Certificate

# C55310L0 - Library and Information Technology Library Programs Certificate

## Overview

**Program Code**
C55310L0

**Credential**
Certificate

## Degree Maps

Library Programs Certificate
**Total Credits**
18

| Semester | Term | Term Credits |
|---|---|---|
| 1st Semester | Fall | 9 |

**Courses**
- LIB111 - Library Info Resources and Services

**Term Credits** 3

**Courses**
- LIB211 - Library Program Development

**Term Credits** 3

**Courses**
- LIB214 - Library Services/Children

**Term Credits** 3

| Semester | Term | Term Credits |
|---|---|---|
| 2nd Semester | Spring | 9 |

**Courses**
- LIB114 - Library Public Service Operations

**Term Credits** 3

**Courses**
- LIB212 - Library Services/Special Needs

**Term Credits** 3

**Courses**
- WEB110 - Web Development Fundamentals

**Term Credits** 3

# C55310M0 - Library and Information Technology Library Management Certificate

## Overview

**Program Code**
C55310M0

**Credential**
Certificate

# C55310P0 - Library and Information Technology Public Service Certificate

## Overview

**Program Code**
C55310P0

**Credential**
Certificate

# C55310T0 - Library and Information Technology Library Tech Services Certificate

## Overview

**Program Code**
C55310T0

**Credential**
Certificate

# C55400 - Manicuring/Nail Technology Certificate

## Overview

**Program Code**
C55400

**Program Description**
The Manicuring/Nail Technology curriculum provides competency-based knowledge, scientific/artistic principles, and hands-on fundamentals associated with the nail technology industry. The curriculum provides a simulated salon environment which enables students to develop manipulative skills.

Course work includes instruction in all phases of professional nail technology, business/computer principles, product knowledge, and other related topics.

Graduates should be prepared to take the North Carolina Cosmetology State Board Licensing Exam and upon passing be licensed and qualify for employment in beauty and nail salons, as a platform artist, and in related businesses.

**Career Pathway Options**
Associate in Applied Science Degree in Cosmetology; Diploma in Cosmetology; Certificate in Cosmetology.

**Career Community**
Professional Services

**Program Length**
2 semesters

**Credential**
Certificate

## Program Outcomes

## Degree Maps

C55400 Manicuring Nail Technology
**Total Credits**
12

| Semester | Term | Term Credits |
|---|---|---|
| 1st Semester | Fall | 6 |

**Courses**
- COS121 - Manicure/Nail Technology I

**Term Credits** 6

| Semester | Term | Term Credits |
|---|---|---|
| 2nd Semester | Spring | 6 |

**Courses**
- COS222 - Manicure/Nail Tech. II

**Term Credits** 6

## C55490 - Elementary Education Residency Licensure Certificate

### Overview

**Program Code**
C55490

**Program Description**
The Elementary Education Residency Certificate curriculum provides a course of study leading to the development of the general pedagogical competencies needed to become certified to teach by the North Carolina Department of Public Instruction. Course work includes learning theory, instructional/educational technology, diverse learners, school policies and procedures, expectations and responsibilities of educators, teaching strategies/methods for specific content/ specialty areas, formative/summative assessment, data informed practice, and classroom organization/management to enhance learning. Graduates should meet general pedagogical competencies and demonstrate effective teaching practices. Additional requirements, such as pre-service training, passing the state required assessments, and the criteria included in the North Carolina Teacher Evaluation System, are required for licensure.

**Career Community**
Professional Services

**Program Length**
4 semesters

**Credential**
Certificate

### Program Outcomes

### Degree Maps

Elementary Education Residency Licensure Certificate
**Total Credits**
18

| Semester | Term | Term Credits |
|---|---|---|
| 1st Semester | Fall | 2 |

**Courses**
- EDU270 - Effective Instructional Environments

**Term Credits** 2

| Semester | Term | Term Credits |
|---|---|---|
| 2nd Semester | Spring | 7 |

**Courses**
- EDU278 - Integrated Curriculum and Instructional Strategies: Social Studies/ELA

**Term Credits** 3

**Courses**
- EDU279 - Literacy Development and Instruction

**Term Credits** 4

| Semester | Term | Term Credits |
|---|---|---|
| 3rd Semester | Fall | 6 |

**Courses**
- EDU272 - Technology, Data, and Assessment

**Term Credits** 3

**Courses**
- EDU277 - Integrated Curriculum and Instructional Strategies: Math/Science

**Term Credits** 3

| Semester | Term | Term Credits |
|---|---|---|
| 4th Semester | Spring | 3 |

**Courses**
- EDU283 - Educator Preparation Practicum

**Term Credits** 3

## C55850 - Early Childhood Administration Certificate

### Overview

**Program Code**
C55850

**Program Description**
This curriculum prepares individuals pursuing administrating roles in diverse child care settings to effectively work with children, families and teachers. The certificate is composed of learning opportunities in developmental theories, competency and evidence-based professional knowledge, administrative skills and leadership qualities.

Course work includes foundations in early childhood education, physical/ nutritional needs of young children, safety issues in the care of young children; communication and leadership skills with teachers, families and children; programming and staffing, budgeting/financial management and marketing, and rules and regulations of early childhood programs.

Employment opportunities include entrepreneurship and/or management of child development and child care programs, preschools, public and private schools, recreational centers, Early Head Start and Head Start programs, and other programs.

**Career Pathway Options**
Associate in Applied Science Degree in Early Childhood Associate (Higher entrance standards required); Early Childhood Diploma (Higher entrance standards required); Early Childhood Administration Certificate

**Career Community**
Professional Services

**Program Length**
2 semesters

**Credential**
Certificate

## Program Outcomes

## Degree Maps

Early Childhood Administration Certificate
**Total Credits**
16

| Semester | Term | Term Credits |
|---|---|---|
| 1st Semester | Fall | 10 |

**Courses**
- EDU119 - Introduction to Early Childhood Education

**Term Credits** 4

**Courses**
- EDU131 - Child, Family, and Community

**Term Credits** 3

**Courses**
- EDU153 - Health, Safety and Nutrition

**Term Credits** 3

| Semester | Term | Term Credits |
|---|---|---|
| 2nd Semester | Spring | 6 |

**Courses**
- EDU261 - Early Childhood Administration I

**Term Credits** 3

**Courses**
- EDU262 - Early Childhood Administration II

**Term Credits** 3

# C55860 - Early Childhood Preschool Certificate

## Overview

**Program Code**
C55860

**Program Description**
This curriculum prepares individuals to work with preschool aged children (3-5) in diverse learning environments. Students will combine learned theories, competency-based knowledge, and practice in actual settings with preschool children.

Course work includes child growth and development, physical/nutritional needs of preschool children, safety issues in the care of preschool children; care and guidance; communication skills with families and children; design and implementation of appropriate curriculum; and other related topics.

Graduates should be prepared to plan and implement developmentally appropriate preschool 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 other preschool programs.

**Career Pathway Options**
Associate in Applied Science Degree in Early Childhood Education (Higher entrance standards required); Early Childhood Education Diploma (Higher entrance standards required); Preschool Certificate

**Career Community**
Professional Services

**Program Length**
2 semesters

**Credential**
Certificate

## Program Outcomes

## Degree Maps

Early Childhood Preschool Certificate
**Total Credits**
16

| Semester | Term | Term Credits |
|---|---|---|
| 1st Semester | Fall | 10 |

**Courses**
- EDU119 - Introduction to Early Childhood Education

**Term Credits** 4

**Courses**
- EDU131 - Child, Family, and Community

**Term Credits** 3

**Courses**
- EDU145 - Child Development II

**Term Credits** 3

| Semester | Term | Term Credits |
|---|---|---|
| 2nd Semester | Spring | 6 |

**Courses**
- EDU153 - Health, Safety and Nutrition

**Term Credits** 3

**Courses**
- EDU146 - Child Guidance

**Term Credits** 3

# C60140 - Automotive Restoration Technology Certificate

## Overview

**Program Code**
C60140

**Career Pathway Options**
Diploma in Automotive Restoration Technology (Higher entrance standards required).

**Career Community**
Applied Technologies

**Program Length**
2 semesters

**Credential**
Certificate

## Program Outcomes

## Degree Maps

Automotive Restoration Technology Certificate

**Total Credits**
15

| Semester | Term | Term Credits |
|---|---|---|
| 1st Semester | Fall | 7 |

**Courses**
- TRN110 - Introduction to Transport Technology

**Term Credits** 2

**Courses**
- TRN120 - Basic Transportation Electricity

**Term Credits** 5

| Semester | Term | Term Credits |
|---|---|---|
| 2nd Semester | Spring | 8 |

**Courses**
- AUB111 - Painting & Refinishing I

**Term Credits** 4

**Courses**
- AUB112 - Painting & Refinishing II

**Term Credits** 4

# C60160 - Automotive Systems Technology Certificate

## Overview

**Program Code**
C60160

**Career Pathway Options**
Associate in Applied Science Degree in Automotive Systems Technology (Higher entrance standards required), Diploma in Automotive Systems Technology (Higher entrance standards required), Certificate in Automotive Systems Technology.

**Career Community**
Applied Technologies

**Program Length**
2 semesters

**Credential**
Certificate

## Program Outcomes

## Degree Maps

Automotive Systems Technology Certificate

**Total Credits**
17

| Semester | Term | Term Credits |
|---|---|---|
| 1st Semester | Fall | 9 |

**Courses**
- AUT151 - Brake Systems

**Term Credits** 3

**Courses**
- AUT151A - Brakes Systems Lab

**Term Credits** 1

**Courses**
- TRN120 - Basic Transportation Electricity

**Term Credits** 5

| Semester | Term | Term Credits |
|---|---|---|
| 2nd Semester | Spring | 8 |

**Courses**
- AUT163 - Advanced Automotive Electricity

**Term Credits** 3

**Courses**
- AUT163A - Advanced Automotive Electricity Lab

**Term Credits** 1

**Courses**
- AUT181 - Engine Performance 1

**Term Credits** 3

**Courses**
- AUT181A (Generic)

**Term Credits** 1

# C60160EV - Automotive Systems Technology Electric Vehicle Servicing Certificate

## Overview

**Program Code**
C60160EV

**Career Pathway Options**
Associate in Applied Science Degree in Automotive Systems Technology (Higher entrance standards required), Diploma in Automotive Systems Technology (Higher entrance standards required), Certificate in Electrical Vehicle Servicing

**Career Community**
Applied Technologies

**Program Length**
1 semester

**Credential**
Certificate

## Program Outcomes

## Degree Maps

Electrical Vehicle Servicing Certificate
**Total Credits**
16

| Semester | Term | Term Credits |
|---|---|---|
| 1st Semester | Fall | 9 |

**Courses**
- TRN110 - Introduction to Transport Technology

**Term Credits** 2

**Courses**
- TRN120 - Basic Transportation Electricity

**Term Credits** 5

**Courses**
- ATT115 - Green Transportation Safety and Service

**Term Credits** 2

| Semester | Term | Term Credits |
|---|---|---|
| 2nd Semester | Spring | 7 |

**Courses**
- AUT163 - Advanced Automotive Electricity

**Term Credits** 3

**Courses**
- AUT163A - Advanced Automotive Electricity Lab

**Term Credits** 1

# C60260 - Motorcycle Mechanics Certificate

## Overview

**Program Code**
C60260

**Career Pathway Options**
Diploma in Motorcycle Mechanics (Higher entrance standards required), Certificate in Motorcycle Mechanics

**Career Community**
Applied Technologies

**Program Length**
2 semesters

**Credential**
Certificate

## Program Outcomes

## Degree Maps

Motorcycle Mechanics Certificate
**Total Credits**
15

| Semester | Term | Term Credits |
|---|---|---|
| 1st Semester | Fall | 5 |

**Courses**
- MCM115 - Motorcycle Chassis

**Term Credits** 3

**Courses**
- TRN110 - Introduction to Transport Technology

**Term Credits** 2

| Semester | Term | Term Credits |
|---|---|---|
| 2nd Semester | Spring | 10 |

**Courses**
- MCM122 - Motorcycle Engines

**Term Credits** 5

**Courses**
- TRN120 - Basic Transportation Electricity

**Term Credits** 5

# D25120HR - Business Administration Diploma-Human Resources

## Overview

**Program Code**
D25120HR

**Career Pathway Options**
Associate in Applied Science Degree in Business Administration

**Career Community**
Business Technologies

**Program Length**
4 semesters

**Credential**
Diploma

## Program Outcomes

## Degree Maps

Business Administration, Human Resource Management Track, Diploma
**Total Credits**
44

| Semester | Term | Term Credits |
|---|---|---|
| 1st Semester | Fall | 13 |

**Courses**
- BUS110 - Introduction to Business

**Term Credits** 3

**Courses**
- BUS234 - Training and Development

**Term Credits** 3

**Courses**
- BUS256 - Recruiting, Selection, & Personnel Planning

**Term Credits** 3

**Courses**
- BUS258 - Compensation and Benefits

**Term Credits** 3

**Courses**
- ACA122 - College Transfer Success

**Term Credits** 1

| Semester | Term | Term Credits |
|---|---|---|
| 2nd Semester | Spring | 12 |

**Courses**
- BUS137 - Principles of Management

**Term Credits** 3

**Courses**
- ENG111 - Writing and Inquiry

**Term Credits** 3

**Courses**
- BUS217 - Employment Law and Regulations

**Term Credits** 3

**Courses**
- CIS110 - Introduction to Computers

**Term Credits** 3

| Semester | Term | Term Credits |
|---|---|---|
| 3rd Semester | Summer | 6 |

**Courses**
- BUS153 - Human Resource Management

**Term Credits** 3

**Courses**
- Economics requirement (Generic)

**Term Credits** 3

| Semester | Term | Term Credits |
|---|---|---|
| 4th Semester | Fall | 13 |

**Courses**
- BUS115 - Business Law I

**Term Credits** 3

**Courses**
- MKT120 - Principles of Marketing

**Term Credits** 3

**Courses**
- ACC120 - Principles of Financial Accounting

**Term Credits** 4

**Courses**
- MAT110 - Mathematical Measurement and Literacy
  **OR**
- MAT143 - Quantitative Literacy

**Term Credits** 3

## Approved AAS Electives

**Approved AAS Electives (C-L-SHC)**

| APPROVED HUMANITIES/FINE ARTS ELECTIVES | APPROVED SOCIAL/BEHAVIORAL SCIENCE ELECTIVES |
|---|---|
| ART 111 Art Appreciation 3-0-3 | ANT 210 General Anthropology 3-0-3 |
| ART 114 Art History Survey I 3-0-3 | ANT 220 Cultural Anthropology 3-0-3 |
| ART 115 Art History Survey II 3-0-3 | ECO 151 Survey of Economics 3-0-3 |
| DRA 111 Theatre Appreciation 3-0-3 | ECO 251 Principles of Microeconomics 3-0-3 |
| ENG 125 Creative Writing I 3-0-3 | ECO 252 Principles of Macroeconomics 3-0-3 |
| ENG 231 American Literature I 3-0-3 | HIS 111 World Civilization I 3-0-3 |
| ENG 232 American Literature II 3-0-3 | HIS 112 World Civilization II 3-0-3 |
| *ENG 241 British Literature I 3-0-3 | HIS 131 American History I 3-0-3 |
| *ENG 242 British Literature II 3-0-3 | HIS 132 American History II 3-0-3 |
| HUM 110 Technology and Society 3-0-3 | HIS 222 African-American History I 3-0-3 |
| HUM 115 Critical Thinking 3-0-3 | HIS 223 African-American History II 3-0-3 |
| HUM 120 Cultural Studies 3-0-3 | HIS 226 The Civil War 3-0-3 |
| HUM 122 Southern Culture 3-0-3 | HIS 236 North Carolina History 3-0-3 |
| HUM 150 American Women's Studies 3-0-3 | POL 120 American Government 3-0-3 |
| HUM 160 Introduction to Film 2-2-3 | PSY 150 General Psychology 3-0-3 |
| MUS 110 Music Appreciation 3-0-3 | PSY 237 Social Psychology 3-0-3 |
| MUS 112 Introduction to Jazz 3-0-3 | PSY 241 Developmental Psychology 3-0-3 |
| PHI 240 Introduction to Ethics 3-0-3 | PSY 246 Adolescent Psychology 3-0-3 |
| REL 110 World Religions 3-0-3 | PSY 281 Abnormal Psychology 3-0-3 |
| REL 211 Intro to Old Testament 3-0-3 | SOC 210 Introduction to Sociology 3-0-3 |
| REL 212 Intro to New Testament 3-0-3 | SOC 213 Sociology of the Family 3-0-3 |
| | SOC 220 Social Problems 3-0-3 |
| | SOC 225 Social Diversity 3-0-3 |
| | SOC 232 Social Context of Aging 3-0-3 |
| *Not applicable for some health sciences programs.* | SOC 240 Social Psychology 3-0-3 |

# D25120M0 - Business Administration Management Diploma

## Overview

**Program Code**
D25120M0

**Program Description**
The Business Administration curriculum is designed to introduce students to the various aspects of the free enterprise system. Students will be 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, 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 will have 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.

**Career Pathway Options**
Associate in Applied Science Degree in Business Administration

**Career Community**
Business Technologies

**Program Length**
5 semesters

**Credential**
Diploma

## Program Outcomes

## Degree Maps

Business Administration General Track, Diploma

**Total Credits**
36

| Semester | Term | Term Credits |
|---|---|---|
| 1st Semester | Fall | 11 |

**Courses**
- ACC120 - Principles of Financial Accounting

**Term Credits** 4

**Courses**
- BUS125 - Personal Finance

**Term Credits** 3

**Courses**
- BUS137 - Principles of Management

**Term Credits** 3

**Courses**
- ACA122 - College Transfer Success

**Term Credits** 1

| Semester | Term | Term Credits |
|---|---|---|
| 2nd Semester | Spring | 10 |

**Courses**
- ACC121 - Principles of Managerial Accounting

**Term Credits** 4

**Courses**
- CIS110 - Introduction to Computers

**Term Credits** 3

**Courses**

- ECO151 - Survey of Economics
  **OR**
- ECO251 - Principles of Microeconomics
  **OR**
- ECO252 - Principles of Macroeconomics

**Term Credits** 3

| Semester | Term | Term Credits |
|---|---|---|
| 3rd Semester | Summer | 3 |

**Courses**

- ENG111 - Writing and Inquiry

**Term Credits** 3

| Semester | Term | Term Credits |
|---|---|---|
| 4th Semester | Fall | 6 |

**Courses**

- BUS110 - Introduction to Business

**Term Credits** 3

**Courses**

- MKT120 - Principles of Marketing

**Term Credits** 3

| Semester | Term | Term Credits |
|---|---|---|
| 5th Semester | Spring | 6 |

**Courses**

- BUS115 - Business Law I

**Term Credits** 3

**Courses**

- MAT110 - Mathematical Measurement and Literacy
  **OR**
- MAT143 - Quantitative Literacy

**Term Credits** 3

## Approved AAS Electives

**Approved AAS Electives (C-L-SHC)**

| APPROVED HUMANITIES/FINE ARTS ELECTIVES | APPROVED SOCIAL/BEHAVIORAL SCIENCE ELECTIVES |
|---|---|
| ART 111 Art Appreciation 3-0-3 | ANT 210 General Anthropology 3-0-3 |
| ART 114 Art History Survey I 3-0-3 | ANT 220 Cultural Anthropology 3-0-3 |
| ART 115 Art History Survey II 3-0-3 | ECO 151 Survey of Economics 3-0-3 |
| DRA 111 Theatre Appreciation 3-0-3 | ECO 251 Principles of Microeconomics 3-0-3 |
| ENG 125 Creative Writing I 3-0-3 | ECO 252 Principles of Macroeconomics 3-0-3 |
| ENG 231 American Literature I 3-0-3 | HIS 111 World Civilization I 3-0-3 |
| ENG 232 American Literature II 3-0-3 | HIS 112 World Civilization II 3-0-3 |
| *ENG 241 British Literature I 3-0-3 | HIS 131 American History I 3-0-3 |
| *ENG 242 British Literature II 3-0-3 | HIS 132 American History II 3-0-3 |
| HUM 110 Technology and Society 3-0-3 | HIS 222 African-American History I 3-0-3 |
| HUM 115 Critical Thinking 3-0-3 | HIS 223 African-American History II 3-0-3 |
| HUM 120 Cultural Studies 3-0-3 | HIS 226 The Civil War 3-0-3 |
| HUM 122 Southern Culture 3-0-3 | HIS 236 North Carolina History 3-0-3 |
| HUM 150 American Women's Studies 3-0-3 | POL 120 American Government 3-0-3 |
| HUM 160 Introduction to Film 2-2-3 | PSY 150 General Psychology 3-0-3 |
| MUS 110 Music Appreciation 3-0-3 | PSY 237 Social Psychology 3-0-3 |
| MUS 112 Introduction to Jazz 3-0-3 | PSY 241 Developmental Psychology 3-0-3 |
| PHI 240 Introduction to Ethics 3-0-3 | PSY 246 Adolescent Psychology 3-0-3 |
| REL 110 World Religions 3-0-3 | PSY 281 Abnormal Psychology 3-0-3 |
| REL 211 Intro to Old Testament 3-0-3 | SOC 210 Introduction to Sociology 3-0-3 |
| REL 212 Intro to New Testament 3-0-3 | SOC 213 Sociology of the Family 3-0-3 |
| | SOC 220 Social Problems 3-0-3 |
| | SOC 225 Social Diversity 3-0-3 |
| | SOC 232 Social Context of Aging 3-0-3 |
| *Not applicable for some health sciences programs.* | SOC 240 Social Psychology 3-0-3 |

# D25310 - Medical Office Administration Diploma

## Overview

**Program Code**
D25310

**Career Pathway Options**
Associate in Applied Science Degree in Medical Office Administration

**Career Community**
Business Technologies

**Program Length**
3 semesters

**Credential**
Diploma

## Program Outcomes

## Degree Maps

Medical Office Administration Diploma
**Total Credits**
44

| Semester | Term | Term Credits |
|---|---|---|
| 1st Semester | Fall | 18 |

**Courses**
- ENG111 - Writing and Inquiry

**Term Credits** 3

**Courses**
- OST136 - Word Processing

**Term Credits** 3

**Courses**
- OST137 - Office Applications I

**Term Credits** 3

**Courses**
- OST141 - Medical Office Terms I

**Term Credits** 3

**Courses**
- OST148 - Medical Insurance and Billing

**Term Credits** 3

**Courses**
- OST164 - Office Editing

**Term Credits** 3

| Semester | Term | Term Credits |
|---|---|---|
| 2nd Semester | Spring | 17 |

**Courses**
- BIO163 - Basic Anatomy & Physiology

**Term Credits** 5

**Courses**
- OST142 - Medical Office Terms II

**Term Credits** 3

**Courses**
- OST184 - Office Information Management

**Term Credits** 3

**Courses**
- OST247 - Procedure Coding

**Term Credits** 3

**Courses**
- OST248 - Diagnostic Coding

**Term Credits** 3

| Semester | Term | Term Credits |
|---|---|---|
| 3rd Semester | Summer | 9 |

**Courses**
- OST149 - Medical Legal Issues

**Term Credits** 3

**Courses**
- OST243 - Medical Office Simulation

**Term Credits** 3

**Courses**
- Communications, select one: ENG 112, ENG 114, ENG 115, ENG 116, COM 110, COM 120, COM 231 (Generic)

**Term Credits** 3

# D25370 - Office Management Diploma

## Overview

**Program Code**
D25370

**Program Description**
The Office Management curriculum prepares individuals for employment as administrative office personnel who use skills in the areas of office management, office finance, legal office, virtual office, customer service, and office software.

Course work includes computer applications, oral and written communication, analysis and coordination of office tasks and procedures, records management, and other topics depending on the subject area selected within this curriculum.

Graduates should qualify for employment opportunities in a variety of office positions in business, government, and industry. Upon graduation, students may be eligible to sit for industry recognized certification exams.

**Career Pathway Options**
Associate in Applied Science Degree in Medical Office Administration, Office Administration Diploma

**Career Community**
Business Technologies

**Program Length**
4 semesters

**Credential**
Diploma

## Program Outcomes

## Degree Maps

Office Management Diploma
**Total Credits**
38

| Semester | Term | Term Credits |
|---|---|---|
| 1st Semester | Fall | 11 |

**Courses**
- ACA122 - College Transfer Success

**Term Credits** 1

**Courses**
- BUS110 - Introduction to Business

**Term Credits** 3

**Courses**
- ENG111 - Writing and Inquiry

**Term Credits** 3

**Courses**
- ACC120 - Principles of Financial Accounting

**Term Credits** 4

| Semester | Term | Term Credits |
|---|---|---|
| 2nd Semester | Spring | 12 |

**Courses**
- BUS260 - Business Communication

**Term Credits** 3

**Courses**
- OST136 - Word Processing

**Term Credits** 3

**Courses**
- OST137 - Office Applications I

**Term Credits** 3

**Courses**
- OST164 - Office Editing

**Term Credits** 3

| Semester | Term | Term Credits |
|---|---|---|
| 3rd Semester | Fall | 6 |

**Courses**
- OST289 - Office Administration Capstone

**Term Credits** 3

**Courses**
- Communications, select one: ENG 112, ENG 114, ENG 115, ENG 116, COM 110, COM 120, COM 231 (Generic)

**Term Credits** 3

| Semester | Term | Term Credits |
|---|---|---|
| 4th Semester | Spring | 9 |

**Courses**
- CTS130 - Spreadsheet

**Term Credits** 3

**Courses**
- OST184 - Office Information Management

**Term Credits** 3

**Courses**
- BUS125 - Personal Finance

**Term Credits** 3

# D25380 - Paralegal Technology Diploma

## Overview

**Program Code**
D25380

**Career Pathway Options**
Associate in Applied Science Degree in Paralegal Technology (Higher entrance standards required); Paralegal Technology Diploma

**Career Community**
Business Technologies

**Program Length**
3 semesters

**Credential**
Diploma

## Program Outcomes

## Degree Maps

Paralegal Technology Diploma
**Total Credits**
42

| Semester | Term | Term Credits |
|---|---|---|
| 1st Semester | Fall | 19 |

**Courses**
- LEX110 - Introduction to Paralegal Study

**Term Credits** 2

**Courses**
- LEX120 - Legal Research/Writing I

**Term Credits** 3

**Courses**
- LEX130 - Civil Injuries

**Term Credits** 3

**Courses**
- LEX150 - Commercial Law I

**Term Credits** 3

**Courses**
- LEX210 - Real Property I

**Term Credits** 3

**Courses**
- LEX250 - Wills, Estates, & Trusts

**Term Credits** 3

**Courses**
- LEX280 - Ethics & Professionalism

**Term Credits** 2

| Semester | Term | Term Credits |
|---|---|---|
| 2nd Semester | Spring | 14 |

**Courses**
- LEX121 - Legal Research/Writing II

**Term Credits** 3

**Courses**
- LEX160 - Criminal Law & Procedure

**Term Credits** 3

**Courses**
- LEX211 - Real Property II

**Term Credits** 3

**Courses**
- LEX240 - Family Law

**Term Credits** 3

**Courses**
- LEX270 - Law Office Management/Technology

**Term Credits** 2

| Semester | Term | Term Credits |
|---|---|---|
| 3rd Semester | Summer | 9 |

**Courses**
- ACC115 - College Accounting

**Term Credits** 4

**Courses**
- LEX140 - Civil Litigation I

**Term Credits** 3

**Courses**
- LEX271 - Law Office Writing

**Term Credits** 2

# D25590 - Information Technology Business Systems & Operations Support Diploma

## Overview

**Program Code**
D25590

**Career Pathway Options**
Associate in Applied Science Degree in Information Technology (Higher entrance standards required), Diploma in Information Technology

**Career Community**
STEM

**Program Length**
3 semesters

**Credential**
Diploma

## Program Outcomes

## Degree Maps

Information Technology-Business Systems & Operations Support Diploma
**Total Credits**
43

| Semester | Term | Term Credits |
|---|---|---|
| 1st Semester | Fall | 19 |

**Courses**
- ACA122 - College Transfer Success

**Term Credits** 1

**Courses**
- CTI110 - Information Technology Foundations

**Term Credits** 3

**Courses**
- CTI120 - Network and Security Foundations

**Term Credits** 3

**Courses**
- CTS115 - Information Systems Business Concepts

**Term Credits** 3

**Courses**
- CTS120 - Hardware/Software Support

**Term Credits** 3

**Courses**
- NOS130 - Windows Single User

**Term Credits** 3

**Courses**
- ENG111 - Writing and Inquiry

**Term Credits** 3

| Semester | Term | Term Credits |
|---|---|---|
| 2nd Semester | Spring | 15 |

**Courses**
- CIS115 - Introduction to Programming and Logic

**Term Credits** 3

**Courses**
- CSC113 - Artificial Intelligence Fundamentals

**Term Credits** 3

**Courses**
- DBA110 - Database Concepts

**Term Credits** 3

**Courses**
- WEB115 - Web Markup and Scripting

**Term Credits** 3

**Courses**
- MAT143 - Quantitative Literacy
  **OR**
- MAT171 - Precalculus Algebra

**Term Credits** 3

| Semester | Term | Term Credits |
|---|---|---|
| 3rd Semester | Summer | 9 |

**Courses**
- NOS230 - Windows Administration I

**Term Credits** 3

**Courses**
- SEC110 - Security Concepts

**Term Credits** 3

**Courses**
- CSC134 - C++ Programming
  **OR**
- CSC139 - Visual BASIC Programming
  **OR**
- CSC151 - JAVA Programming

**Term Credits** 3

# D25590N - Information Technology Network and Cybersecurity Management Diploma

## Overview

**Program Code**
D25590N

**Career Pathway Options**
Associate in Applied Science Degree in Network Technology, Diploma in Network Technology.

**Career Community**
STEM

**Program Length**
4 semesters

**Credential**
Diploma

## Program Outcomes

## Degree Maps

Network and Cybersecurity Management Diploma
**Total Credits**
43

| Semester | Term | Term Credits |
|---|---|---|
| 1st Semester | Fall | 16 |

**Courses**
- ACA122 - College Transfer Success

**Term Credits** 1

**Courses**
- CTI110 - Information Technology Foundations

**Term Credits** 3

**Courses**
- CTI120 - Network and Security Foundations

**Term Credits** 3

**Courses**
- CTS115 - Information Systems Business Concepts

**Term Credits** 3

**Courses**
- NOS130 - Windows Single User

**Term Credits** 3

**Courses**
- SEC110 - Security Concepts

**Term Credits** 3

| Semester | Term | Term Credits |
|---|---|---|
| 2nd Semester | Spring | 12 |

**Courses**
- NET125 - Introduction to Networks

**Term Credits** 3

**Courses**
- NOS120 - Linux Single User

**Term Credits** 3

**Courses**
- NOS230 - Windows Administration I

**Term Credits** 3

**Courses**
- MAT143 - Quantitative Literacy

**OR**
- MAT171 - Precalculus Algebra

**Term Credits** 3

| Semester | Term | Term Credits |
|---|---|---|
| 3rd Semester | Summer | 6 |

**Courses**
- NET126 - Switching and Routing

**Term Credits** 3

**Courses**
- ENG111 - Writing and Inquiry

**Term Credits** 3

| Semester | Term | Term Credits |
|---|---|---|
| 4th Semester | Fall | 9 |

**Courses**
- CIS115 - Introduction to Programming and Logic

**Term Credits** 3

**Courses**
- NOS220 - Linux Administration I

**Term Credits** 3

**Courses**
- SEC150 - Secure Communications

**Term Credits** 3

# D25800 - Accounting and Finance Diploma

## Overview

**Program Code**
D25800

**Career Pathway Options**
Associate in Applied Science Degree in Accounting & Finance

**Career Community**
Business Technologies

**Program Length**
3 semesters

**Credential**
Diploma

## Program Outcomes

## Degree Maps

Accounting and Finance, Diploma
**Total Credits**
38

| Semester | Term | Term Credits |
|---|---|---|
| 1st Semester | Fall | 17 |

**Courses**
- ACA122 - College Transfer Success

**Term Credits** 1

**Courses**
- ACC120 - Principles of Financial Accounting

**Term Credits** 4

**Courses**
- ACC129 - Individual Income Taxes

**Term Credits** 3

**Courses**
- BUS110 - Introduction to Business

**Term Credits** 3

**Courses**
- BUS125 - Personal Finance

**Term Credits** 3

**Courses**
- ENG111 - Writing and Inquiry

**Term Credits** 3

| Semester | Term | Term Credits |
|---|---|---|
| 2nd Semester | Spring | 15 |

**Courses**
- ACC121 - Principles of Managerial Accounting

**Term Credits** 4

**Courses**
- ACC122 - Principles of Financial Accounting II

**Term Credits** 3

**Courses**
- BUS115 - Business Law I

**Term Credits** 3

**Courses**
- ACC140 - Payroll Accounting
  **OR**
- ACC150 - Accounting Software Applications

**Term Credits** 2

**Courses**
- ECO151 - Survey of Economics
  **OR**
- ECO251 - Principles of Microeconomics
  **OR**
- ECO252 - Principles of Macroeconomics

**Term Credits** 3

| Semester | Term | Term Credits |
|---|---|---|
| 3rd Semester | Summer | 6 |

**Courses**
- CIS110 - Introduction to Computers

**Term Credits** 3

**Courses**
- MAT110 - Mathematical Measurement and Literacy
  **OR**
- MAT143 - Quantitative Literacy

**Term Credits** 3

# D3012010 - Audio Production Technology Diploma

## Overview

**Program Code**
D3012010

**Career Pathway Options**
Associate in Applied Science Degree in Audio and Video Production Technology (Higher entrance standards required); Diploma in Video Production Technology

**Career Community**
Arts

**Program Length**
3 semesters

**Credential**
Diploma

## Program Outcomes

## Degree Maps

Audio Production Technology Diploma
**Total Credits**
37

| Semester | Term | Term Credits |
|---|---|---|
| 1st Semester | Fall | 20 |

**Courses**
- BPT110 - Media Evolution

**Term Credits** 3

**Courses**
- BPT112 - Media Writing

**Term Credits** 4

**Courses**
- BPT121 - Media Speech Techniques

**Term Credits** 3

**Courses**
- BPT131 - Audio Production I

**Term Credits** 4

**Courses**
- BPT135 - Audio Performance I

**Term Credits** 2

**Courses**
- BPT215 - Industry Career Preparation

**Term Credits** 3

**Courses**
- ACA122 - College Transfer Success

**Term Credits** 1

| Semester | Term | Term Credits |
|---|---|---|
| 2nd Semester | Spring | 16 |

**Courses**
- BPT220 - Emerging Technologies

**Term Credits** 4

**Courses**
- BPT132 - Audio Production II

**Term Credits** 4

**Courses**
- BPT136 - Audio Performance II

**Term Credits** 2

**Courses**
- Humanities/Fine Arts Elective (Generic)

**Term Credits** 3

**Courses**
- ENG110 - Freshman Composition

**OR**
- ENG111 - Writing and Inquiry

**Term Credits** 3

| Semester | Term | Term Credits |
|---|---|---|
| 3rd Semester | Summer | 1 |

**Courses**
- WBL111 - Work-Based Learning I

**Term Credits** 1

# D3012020 - Video Production Technology Diploma

## Overview

**Program Code**
D3012020

**Career Pathway Options**
Associate in Applied Science Degree in Audio and Video Production Technology (Higher entrance standards required); Diploma in Audio Production Technology.

**Career Community**
Arts

**Program Length**
3 semesters

**Credential**
Diploma

## Program Outcomes

## Degree Maps

Video Production Technology Diploma
**Total Credits**
39

| Semester | Term | Term Credits |
|---|---|---|
| 1st Semester | Fall | 19 |

**Courses**
- BPT110 - Media Evolution

**Term Credits** 3

**Courses**
- BPT112 - Media Writing

**Term Credits** 4

**Courses**
- BPT121 - Media Speech Techniques

**Term Credits** 3

**Courses**
- BPT215 - Industry Career Preparation

**Term Credits** 3

**Courses**
- BPT231 - Video Production I

**Term Credits** 4

**Courses**
- BPT235A (Generic)

**Term Credits** 1

**Courses**
- ACA122 - College Transfer Success

**Term Credits** 1

| Semester | Term | Term Credits |
|---|---|---|
| 2nd Semester | Spring | 18 |

**Courses**
- BPT250 - Corporate Video

**Term Credits** 3

**Courses**
- BPT220 - Emerging Technologies

**Term Credits** 4

**Courses**
- BPT232 - Video Production II

**Term Credits** 4

**Courses**
- BPT235B (Generic)

**Term Credits** 1

**Courses**
- Humanities/Fine Arts Elective (Generic)

**Term Credits** 3

**Courses**
- ENG110 - Freshman Composition
  **OR**
- ENG111 - Writing and Inquiry

**Term Credits** 3

| Semester | Term | Term Credits |
|---|---|---|
| 3rd Semester | Summer | 2 |

**Courses**
- BPT236 - Video Performance II
  **OR**
- WBL121 - Work-Based Learning II

**Term Credits** 2

## Approved AAS Electives

**Approved AAS Electives (C-L-SHC)**

| APPROVED HUMANITIES/FINE ARTS ELECTIVES | APPROVED SOCIAL/BEHAVIORAL SCIENCE ELECTIVES |
|---|---|
| ART 111 Art Appreciation 3-0-3 | ANT 210 General Anthropology 3-0-3 |
| ART 114 Art History Survey I 3-0-3 | ANT 220 Cultural Anthropology 3-0-3 |
| ART 115 Art History Survey II 3-0-3 | ECO 151 Survey of Economics 3-0-3 |
| DRA 111 Theatre Appreciation 3-0-3 | ECO 251 Principles of Microeconomics 3-0-3 |
| ENG 125 Creative Writing I 3-0-3 | ECO 252 Principles of Macroeconomics 3-0-3 |
| ENG 231 American Literature I 3-0-3 | HIS 111 World Civilization I 3-0-3 |
| ENG 232 American Literature II 3-0-3 | HIS 112 World Civilization II 3-0-3 |
| *ENG 241 British Literature I 3-0-3 | HIS 131 American History I 3-0-3 |
| *ENG 242 British Literature II 3-0-3 | HIS 132 American History II 3-0-3 |
| HUM 110 Technology and Society 3-0-3 | HIS 222 African-American History I 3-0-3 |
| HUM 115 Critical Thinking 3-0-3 | HIS 223 African-American History II 3-0-3 |
| HUM 120 Cultural Studies 3-0-3 | HIS 226 The Civil War 3-0-3 |
| HUM 122 Southern Culture 3-0-3 | HIS 236 North Carolina History 3-0-3 |
| HUM 150 American Women's Studies 3-0-3 | POL 120 American Government 3-0-3 |
| HUM 160 Introduction to Film 2-2-3 | PSY 150 General Psychology 3-0-3 |
| MUS 110 Music Appreciation 3-0-3 | PSY 237 Social Psychology 3-0-3 |
| MUS 112 Introduction to Jazz 3-0-3 | PSY 241 Developmental Psychology 3-0-3 |
| PHI 240 Introduction to Ethics 3-0-3 | PSY 246 Adolescent Psychology 3-0-3 |
| REL 110 World Religions 3-0-3 | PSY 281 Abnormal Psychology 3-0-3 |
| REL 211 Intro to Old Testament 3-0-3 | SOC 210 Introduction to Sociology 3-0-3 |
| REL 212 Intro to New Testament 3-0-3 | SOC 213 Sociology of the Family 3-0-3 |
| | SOC 220 Social Problems 3-0-3 |
| | SOC 225 Social Diversity 3-0-3 |
| | SOC 232 Social Context of Aging 3-0-3 |
| *Not applicable for some health sciences programs.* | SOC 240 Social Psychology3-0-3 |

# D35100 - Air Conditioning, Heating and Refrigeration Technology Diploma

## Overview

**Program Code**
D35100

**Career Community**
Applied Technologies

**Program Length**
4 semesters

**Credential**
Diploma

## Program Outcomes

## Degree Maps

Air Conditioning, Heating, and Refrigeration Technology, Diploma
**Total Credits**
39

| Semester | Term | Term Credits |
|---|---|---|
| 1st Semester | Fall | 12 |

**Courses**
- AHR110 - Introduction to Refrigeration

**Term Credits** 5

**Courses**
- AHR111 - HVACR Electricity

**Term Credits** 3

**Courses**
- ACA122 - College Transfer Success

**Term Credits** 1

**Courses**
- ENG110 - Freshman Composition
  **OR**
- ENG111 - Writing and Inquiry

**Term Credits** 3

| Semester | Term | Term Credits |
|---|---|---|
| 2nd Semester | Spring | 12 |

**Courses**
- AHR112 - Heating Technology

**Term Credits** 4

**Courses**
- AHR113 - Comfort Cooling

**Term Credits** 4

**Courses**
- AHR114 - Heat Pump Technology

**Term Credits** 4

| Semester | Term | Term Credits |
|---|---|---|
| 3rd Semester | Summer | 6 |

**Courses**
- AHR115 - Refrigeration Systems

**Term Credits** 2

**Courses**
- AHR160 - Refrigerant Certification

**Term Credits** 1

**Courses**
- MAT110 - Mathematical Measurement and Literacy
  **OR**
- MAT143 - Quantitative Literacy
  **OR**
- PHY121 - Applied Physics I

**Term Credits** 3

| Semester | Term | Term Credits |
|---|---|---|
| 4th Semester | Fall | 9 |

**Courses**
- AHR125 - HVACR Electronics

**Term Credits** 3

**Courses**
- AHR133 - HVAC Servicing

**Term Credits** 4

**Courses**
- AHR151 - HVAC Duct Systems I

**Term Credits** 2

# D35130C - Electrical Systems Technology Diploma

## Overview

**Program Code**
D35130C

**Career Community**
Applied Technologies

**Program Length**
4 semesters

**Credential**
Diploma

## Program Outcomes

## Degree Maps

Electrical Systems Technology Diploma
**Total Credits**
39

| Semester | Term | Term Credits |
|---|---|---|
| 1st Semester | Fall | 14 |

**Courses**
- ELC112 - DC/AC Electricity

**Term Credits** 5

**Courses**
- ELC113 - Residential Wiring

**Term Credits** 4

**Courses**
- ELC118 - National Electrical Code

**Term Credits** 2

**Courses**
- ISC112 - Industrial Safety

**Term Credits** 2

**Courses**
- ACA122 - College Transfer Success

**Term Credits** 1

| Semester | Term | Term Credits |
|---|---|---|
| 2nd Semester | Spring | 14 |

**Courses**
- ELC114 - Commercial Wiring

**Term Credits** 4

**Courses**
- ELC117 - Motors and Controls

**Term Credits** 4

**Courses**
- ELC119 - NEC Calculations

**Term Credits** 2

**Courses**
- ELN131 - Analog Electronics I

**Term Credits** 4

| Semester | Term | Term Credits |
|---|---|---|
| 3rd Semester | Summer | 2 |

**Courses**
- ELC127 - Software for Technicians

**Term Credits** 2

| Semester | Term | Term Credits |
|---|---|---|
| 4th Semester | Fall | 9 |

**Courses**
- ELC128 - Introduction to Programmable Logic Controller

**Term Credits** 3

**Courses**
- Social/Behavioral Science Elective (Generic)

**Term Credits** 3

**Courses**
- ENG110 - Freshman Composition
  **OR**
- ENG111 - Writing and Inquiry

**Term Credits** 3

## Approved AAS Electives

**Approved AAS Electives (C-L-SHC)**

| APPROVED HUMANITIES/FINE ARTS ELECTIVES | APPROVED SOCIAL/BEHAVIORAL SCIENCE ELECTIVES |
|---|---|
| ART 111 Art Appreciation 3-0-3 | ANT 210 General Anthropology 3-0-3 |
| ART 114 Art History Survey I 3-0-3 | ANT 220 Cultural Anthropology 3-0-3 |
| ART 115 Art History Survey II 3-0-3 | ECO 151 Survey of Economics 3-0-3 |
| DRA 111 Theatre Appreciation 3-0-3 | ECO 251 Principles of Microeconomics 3-0-3 |
| ENG 125 Creative Writing I 3-0-3 | ECO 252 Principles of Macroeconomics 3-0-3 |
| ENG 231 American Literature I 3-0-3 | HIS 111 World Civilization I 3-0-3 |
| ENG 232 American Literature II 3-0-3 | HIS 112 World Civilization II 3-0-3 |
| *ENG 241 British Literature I 3-0-3 | HIS 131 American History I 3-0-3 |
| *ENG 242 British Literature II 3-0-3 | HIS 132 American History II 3-0-3 |
| HUM 110 Technology and Society 3-0-3 | HIS 222 African-American History I 3-0-3 |
| HUM 115 Critical Thinking 3-0-3 | HIS 223 African-American History II 3-0-3 |
| HUM 120 Cultural Studies 3-0-3 | HIS 226 The Civil War 3-0-3 |
| HUM 122 Southern Culture 3-0-3 | HIS 236 North Carolina History 3-0-3 |
| HUM 150 American Women's Studies 3-0-3 | POL 120 American Government 3-0-3 |
| HUM 160 Introduction to Film 2-2-3 | PSY 150 General Psychology 3-0-3 |
| MUS 110 Music Appreciation 3-0-3 | PSY 237 Social Psychology 3-0-3 |
| MUS 112 Introduction to Jazz 3-0-3 | PSY 241 Developmental Psychology 3-0-3 |
| PHI 240 Introduction to Ethics 3-0-3 | PSY 246 Adolescent Psychology 3-0-3 |
| REL 110 World Religions 3-0-3 | PSY 281 Abnormal Psychology 3-0-3 |
| REL 211 Intro to Old Testament 3-0-3 | SOC 210 Introduction to Sociology 3-0-3 |
| REL 212 Intro to New Testament 3-0-3 | SOC 213 Sociology of the Family 3-0-3 |
| | SOC 220 Social Problems 3-0-3 |
| | SOC 225 Social Diversity 3-0-3 |
| | SOC 232 Social Context of Aging 3-0-3 |
| **Not applicable for some health sciences programs.* | SOC 240 Social Psychology 3-0-3 |

# D35130P0 - Electrical Systems Technology (HCI)

## Overview

**Program Code**
D35130P0

**Credential**
Diploma

# D35140 - Building Construction Technology Diploma

## Overview

**Program Code**
D35140

**Career Community**
Applied Technologies

**Program Length**
3 semesters

**Credential**
Diploma

## Program Outcomes

## Degree Maps

Building Construction Technology Diploma
**Total Credits**
41

| Semester | Term | Term Credits |
|---|---|---|
| 1st Semester | Fall | 15 |

**Courses**
- BPR130 - Print Reading-Construction

**Term Credits** 3

**Courses**
- CST111 - Construction I

**Term Credits** 4

**Courses**
- CST131 - OSHA/Safety/Certification

**Term Credits** 3

**Courses**
- MAS140 - Introduction to Masonry

**Term Credits** 2

**Courses**
- SST140 - Green Building and Design Concepts

**Term Credits** 3

| Semester | Term | Term Credits |
|---|---|---|
| 2nd Semester | Spring | 16 |

**Courses**
- CST112 - Construction II

**Term Credits** 4

**Courses**
- CST241 - Planning/Estimating I

**Term Credits** 3

**Courses**
- CMT120 - Codes and Inspections

**Term Credits** 3

**Courses**
- ELC113 - Residential Wiring

**Term Credits** 4

**Courses**
- PLU111 - Introduction to Basic Plumbing

**Term Credits** 2

| Semester | Term | Term Credits |
|---|---|---|
| 3rd Semester | Summer | 10 |

**Courses**
- CST113 - Construction III

**Term Credits** 4

**Courses**
- ENG111 - Writing and Inquiry

**Term Credits** 3

**Courses**
- MAT110 - Mathematical Measurement and Literacy

**OR**
- MAT143 - Quantitative Literacy

**Term Credits** 3

# D45240 - Dental Assisting Diploma

## Overview

**Program Code**
D45240

**Program Description**
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.

Course work 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 in infection/hazard control, radiography, dental materials, preventive dentistry, 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.

**Career Pathway Options**
Diploma

**Career Community**
Health Sciences

**Program Length**
3 semesters

**Credential**
Diploma

## Program Outcomes

## Degree Maps

Dental Assisting Diploma
**Total Credits**
46

| Semester | Term | Term Credits |
|---|---|---|
| 1st Semester | Fall | 19 |

**Courses**
- BIO106 - Introduction to Anatomy/Physiology/ Microbiology

**Term Credits** 3

**Courses**
- DEN100 - Basic Orofacial Anatomy

**Term Credits** 2

**Courses**
- DEN101 - Preclinical Procedures

**Term Credits** 7

**Courses**
- DEN102 - Dental Materials

**Term Credits** 4

**Courses**
- DEN111 - Infection/Hazard Control

**Term Credits** 2

**Courses**
- ACA122 - College Transfer Success

**Term Credits** 1

| Semester | Term | Term Credits |
|---|---|---|
| 2nd Semester | Spring | 20 |

**Courses**
- DEN103 - Dental Sciences

**Term Credits** 2

**Courses**
- DEN104 - Dental Health Education

**Term Credits** 3

**Courses**
- DEN106 - Clinical Practice I

**Term Credits** 6

**Courses**
- DEN112 - Dental Radiography

**Term Credits** 3

**Courses**
- ENG111 - Writing and Inquiry

**Term Credits** 3

**Courses**
- SOC240 - Social Psychology

**Term Credits** 3

| Semester | Term | Term Credits |
|---|---|---|
| 3rd Semester | Summer | 7 |

**Courses**
- DEN105 - Practice Management

**Term Credits** 2

**Courses**
- DEN107 - Clinical Practice II

**Term Credits** 5

## Limited Enrollment Program Information

**Limited Enrollment Curriculum:**

The Dental Assisting Program is a limited enrollment curriculum. Applicants are accepted based on a selective admissions process. Criteria for admission into the Dental Assisting Program are reviewed annually and are subject to change.

**A. PROGRAM SPECIFIC ENTRANCE STANDARDS:**

**Admission Process**

A student may apply to the Dental Assisting Program once minimum admissions criteria are met.

Prospective applicants are required to complete the Health Sciences information session as well as contact their Education Navigator prior to developing a plan for completing minimum requirements . The Education Navigator will review each applicant's progress and provide further guidance once all minimum admission requirements are met.

Once an applicant has completed all general admissions criteria and all Dental Assisting Program entrance requirements, they must submit a completed Limited Enrollment Application. Applicants who meet all requirements will be ranked according to the order in which they applied.

During the initial consideration, applicants will have an opportunity to indicate first and second choice programs when completing the Limited Enrollment Application. If seats do not fill after the initial consideration and after second choice candidates are considered, applicants will be admitted on a first qualified, first accepted basis up until the date of the required mandatory health science orientation.

Applicants must also submit a completed "Statement of Good Standing Form" explaining the circumstances of any previous exit from any health science program. The letter must be sent from the program director at the time of the student's previous enrollment. CCCC's Dental Programs Department Chair and Vice President of Student Services must approve students who were dismissed, expelled, or suspended for any reason. Students who withhold previous exit information may be dismissed from the program.

Applicants who do not gain entry but want to gain entry in a future year do not need to resubmit their application. Applicants will remain on the active applicant list as long as they are interested in being considered for the program.

It is the applicant's responsibility to ensure that requirements are met by the established deadline.

More information can be found on the Limited Enrollment Website.

**Placement Test Scores**

Students must be eligible to take their gateway Math and English course in order to be eligible to apply. This can be achieved through a High School Unweighted GPA of 2.6 or higher or by presenting acceptable test scores such as SAT, ACT, Accuplacer, or other acceptable scores

The checklist for the Dental Assisting Program indicates the minimum scores required to place into ENG 111 and MAT 110. Students who have an unweighted high school GPA of 2.6 or higher, have met Multiple Measures for Placement or who have earned appropriate transfer credit in English, Math, or developmental courses with a C, P2 for English, or P1 for Math, or higher may be exempt from placement testing.

**GPA**

Students must be in good academic standing upon applying to health science programs. Good academic standing is defined as having a 2.5 GPA or higher based on the general education courses for the program. Students can apply if they have a 2.0-2.5 GPA but will be placed on an alternate list. Alternates will be considered if there are not enough applicants to fill all seats. These GPA requirements must be maintained at the time of entering the program from a secondary or post-secondary institution.

**General Education Courses**

The following courses are required to be completed with a grade of "B" or better prior to applying: BIO-106. The following courses are required to be completed with a grade of "C" or better prior to applying: ENG-111, PSY-150, & ACA-122.

**The Test of English as a Foreign Language (TOEFL)**

TOEFL scores are required for any naturalized or non-US citizens who speak English as their second language. This test provides evidence of adequate proficiency in the English language. All test scores must be less than five years old. The minimum acceptable TOEFL scores are based on the following formats: TOEFL iBT Total Score - **80** or higher

TOEFL Essential Overall Band Score: **8** or higher. The test is offered at multiple testing sites nationally or can be taken online and is at the student's expense.

**B. REQUIREMENTS AFTER ACCEPTANCE:**

**Criminal Background Check/Drug Screening**

A criminal background check and drug screening are required for all accepted Health Sciences students. Clinical affiliates will review criminal background reports and drug screenings of students and reserve the right to accept or deny any students based on their consideration of these reports. Negative reports and/or failed screenings may prevent a student from attending the clinical portion of their prescribed program. This could result in a student's withdrawal from the program. Students are subject to criminal background checks and drug screenings at any time during a clinical rotation. Clinical agencies reserve the right to require additional background checks and drug screens.

**Medical Forms/Immunizations**

Accepted applicants are provided with a student medical health form and are required to submit it to the required document tracking system by an assigned date in their acceptance materials. The student medical form includes proof of a satisfactory health history, a physical examination, and an immunization report. Failure to submit the required information by the assigned date may result in loss of admission status into the Dental Assisting Program, and class space will be assigned to another applicant.

**Hepatitis B shots (3 series shot) required through the second series prior to first Fall semester and completed by Spring semester.

**BLS Provider CPR**

CPR Certification by the American Heart Association (AHA) in BLS Provider (Basic Life Support including CPR and AED) that includes both performance and testing of criteria is required prior to clinical rotations. Students are responsible for keeping their CPR certification current throughout the duration of the program.

**Meeting with Department Chair**

Students are required to meet with the Department Chair for the program prior to the program start date.

**Mandatory Orientation Session**

When notified of acceptance, applicants must attend a mandatory orientation session with the Dental Assisting Department.

**Liability/Malpractice Insurance**

Malpractice insurance is required for health sciences students and is assessed as a student fee.

**Transportation/Additional Class/Course Materials**

Health Sciences students are responsible for their own transportation to off-campus clinical/learning sites. Materials other than textbooks will be required and are purchased at student's expense.

**Technical Standards**

The Health Sciences Programs are physically demanding. Students will be expected to perform lifting, pushing, pulling, and carrying tasks to successfully practice in a lab setting, complete clinical affiliations, and safely treat patients. For more details, please refer to each program's physical requirements and technical standards.

**Communicable Disease Statement**

As a healthcare provider, students enrolled in the Dental Assisting Program are exposed to communicable diseases. Students will be trained in standard precautions and asepsis techniques to minimize the potential of transmission. Students will act as peer patients during the program and will be expected to share medical information during clinical treatment.

**Academic Standards**

Upon official acceptance, Health Sciences students are required to maintain the necessary GPA requirements for entry. Students cannot enter a Health Sciences program while on academic suspension. Health Sciences students must achieve a grade of "C" or higher in their Health Science courses. Students may withdraw or be withdrawn from a Health Sciences course; however, the student will not be allowed to matriculate through their program of study. Reapplication to the program will be required and readmission will be awarded based on the completion

of admissions criteria, the policy for readmission, and space availability. Students requesting readmission must meet with the Education Navigator to review their file.

**Program Specific Academic Standards:**

See additional Program Specific Standards in the Dental Assisting Student Policies and Procedures Manual and specific Dental Assisting Program course syllabus.

Dental assisting and progressive related courses must be taken in succession as they appear in the curriculum guide. Dental assisting students must adhere to the other policies set forth in the Dental Assisting Student Policies and Procedures Manual. Dental assisting students must not be on suspension status.

**C. RE-ADMISSION OR TRANSFER INTO THE DENTAL ASSISTING PROGRAM:**

A student must meet the admissions criteria in effect at the time of request for re-admission or transfer. A student may be required to re-enter a dental assisting course earlier in the curriculum sequence if the student is lacking major content. All dental assisting courses completed more than three years prior to re-admission or transfer must be repeated. Withdrawal or academic failure within the Dental Assisting Program will require the student to reapply to the program for re-entry. Advanced placement is dependent upon space availability. If multiple students apply for re-admission or transfer for the same semester entry, a competitive admissions protocol will be followed to determine the strongest candidate for the available seat. Students who reenter will do so one semester earlier from the semester in which they were released. The procedure for Advanced Standing is valid for candidates for one calendar year from the date leaving the program. After one calendar year, a candidate who wishes to be enrolled in the program must reapply and follow the protocol for re-admission.

The Dental Assisting Department Chair will evaluate transferability of all dental assisting courses. Transfer courses must be equivalent to courses required at the receiving college in both theory and clinical experiences. The student must provide copies of course syllabi and outlines to the Dental Assisting Department Chair for those Dental Assisting courses previously taken. Students lacking essential content may be required to audit a portion of a course, challenge the content, demonstrate skills, or repeat the course as deemed necessary. The final decision for transfer credit for dental assisting courses is determined by the Dental Assisting Department Chair.

Applicants must submit a letter explaining the circumstances of any previous exit from any health science program. The letter must be sent from the previous Program Director. CCCC's Dental Assisting Department Chair and Vice President of Student Services must approve students who were dismissed, expelled, or suspended for any reason. Students who withhold previous exit information may be dismissed from the program. A remediation plan may be required.

# D45360 - Medical Billing and Coding Diploma

## Overview

**Program Code**
D45360

**Career Pathway Options**
Associate in Applied Science Degree in Health Information Technology, Diploma, Certificate(s)

**Career Community**
Health Sciences

**Program Length**
3 semesters

**Credential**
Diploma

## Degree Maps

Medical Coding and Billing, Diploma

**Total Credits**
42

| Semester | Term | Term Credits |
|---|---|---|
| 1st Semester | Fall | 18 |

**Courses**
- ACA122 - College Transfer Success

**Term Credits** 1

**Courses**
- CIS110 - Introduction to Computers

**Term Credits** 3

**Courses**
- BIO163 - Basic Anatomy & Physiology

**Term Credits** 5

**Courses**
- ENG111 - Writing and Inquiry

**Term Credits** 3

**Courses**
- HIT110 - Introduction to Healthcare and HIM Management

**Term Credits** 3

**Courses**
- MED121 - Medical Terminology I

**Term Credits** 3

| Semester | Term | Term Credits |
|---|---|---|
| 2nd Semester | Spring | 17 |

**Courses**
- HIT226 - Pathophysiology & Pharmacology

**Term Credits** 3

**Courses**
- HIT114 - Health Data Systems and Standards

**Term Credits** 3

**Courses**
- MED122 - Medical Terminology II

**Term Credits** 3

**Courses**
- HIT211 - Diagnosis Coding and Reporting

**Term Credits** 3

## Program Outcomes

**Courses**
- HIT213 - Inpatient Procedure Coding & Reporting

**Term Credits** 2

**Courses**
- HIT124 - Professional Practice Exp II

**Term Credits** 1

**Courses**
- HIT215 - Revenue Cycle Management

**Term Credits** 2

| Semester | Term | Term Credits |
|---|---|---|
| 3rd Semester | Summer | 7 |

**Courses**
- HIT112 - Health Law and Ethics

**Term Credits** 3

**Courses**
- HIT214 - Outpatient Procedure Coding/Reporting

**Term Credits** 2

**Courses**
- HIT222 - Professional Practice Exp III

**Term Credits** 2

## Admissions Requirements

**Admissions Requirements**
**Limited Enrollment Curriculum:**

The Health Information Technology program is a limited enrollment curriculum. Program applicants are accepted in the Fall and Spring semesters once minimum admission criteria are met. Admission criteria for the Health Information Technology program are reviewed annually and are subject to change.

**A. PROGRAM SPECIFIC ENTRANCE STANDARDS:**

**Admissions Process**

The student may apply to the Health Information Technology program once minimum admissions criteria are met. This includes the following:

- Minimum 2.0 GPA
- All transcripts received - high school and past colleges
- Eligible to take ENG and MAT without a co-requisite.

**Placement Test Scores**

Students must be eligible to take their gateway Math and English course in order to be eligible to apply. This can be achieved through a High School Unweighted GPA of 2.6 or higher or by presenting acceptable test scores such as SAT, ACT, Accuplacer,\, or other acceptable scores

Students must be able to be placed into ENG 111 and MAT 152. Students who have an unweighted high school GPA of 2.8 or higher, have met Multiple Measures for Placement or who have earned appropriate transfer credit in English, Math, or developmental courses with a C, P2 for English, or P2 for Math, or higher may be exempt from placement testing.

**GPA**

Students must be in good academic standing upon applying to health science programs. Good academic standing is defined as having a 2.0 GPA in the most recent semester attempted as well as maintaining a 2.0 cumulative GPA. These GPA requirements must be maintained at the time of entering the program from a secondary or post-secondary institution.

**The Test of English as a Foreign Language (TOEFL)**

TOEFL scores are required for any naturalized or non-US citizens who speak English as their second language. This test provides evidence of adequate proficiency in the English language. All test scores must be less than five years old. The minimum acceptable TOEFL scores are based on the following formats: TOEFL iBT Total Score - **80** or higher

TOEFL Essential Overall Band Score: **8** or higher. The test is offered at multiple testing sites nationally or can be taken online and is at the student's expense.

**B. REQUIREMENTS AFTER ACCEPTANCE:**

**Criminal Background Check/Drug Screening**

A criminal background check and drug screening will be required for all accepted Health Sciences students. Clinical affiliates will review criminal background reports and drug screenings of students and reserve the right to accept or deny any students based on their consideration of these reports. Negative reports and/or failed screenings can preclude a student from attending the clinical portion of their prescribed program and thus, will result in the student's exit from the program. Students are subject to criminal background check and drug screening at any time during a clinical rotation. Clinical agencies reserve the right to require additional background checks and drug screens.

**Medical Forms/Immunizations**

Applicants are required to submit a completed college approved student medical health form to the required document tracking system by the assigned date. The student medical form must include satisfactory health history, physical examination, and immunization report. Failure to submit the required information by the assigned date will result in loss of Health Information Technology admission status and class space will be assigned to another applicant.

**Liability/Malpractice Insurance**

Malpractice insurance is required for health sciences students and is assessed as a student fee.

**Transportation/Additional Class/Course Materials**

Health Sciences students are responsible for their own transportation to off-campus clinical/learning sites. Materials and textbooks will be required and are purchased at student's expense.

**Technical Standards**

Please refer to the Health Information Technology program physical requirements and technical standards.

**Academic Standards**

Upon official acceptance, Health Sciences students are required to maintain the necessary GPA requirements for entry. Students cannot enter a Health Sciences program while on academic suspension. Health Sciences students must achieve a grade of "C" or higher in their Health Science courses. Students may withdraw or be withdrawn from a Health Sciences course. However, the student will not be allowed to matriculate through their program of study if they do not achieve a grade of "C" or better. Students completing readmission must meet with the Education Navigator to review their file.

**Program Specific Academic Standards:**

See additional Program Specific Standards in the Health Information Technology Program Guide and specific Health Information Technology course syllabus.

Health Information Technology students must maintain an overall and semester GPA 2.0 or better, and must earn a grade of "C" or better in all courses required by the Health Information Technology curriculum in order to graduate. Health Information Technology and progressive related courses must be taken in succession as they appear in the eurriculum guide curriculum guide. Health Information Technology students must adhere to the other policies set forth in the Health Information Technology Program Guide.

**C. RE-ADMISSION OR TRANSFER INTO THE HEALTH INFORMATION TECHNOLOGY PROGRAM:**

The student must qualify under the admission criteria in effect at time of readmission or transfer. A student may be required to re-enter a Health Information Technology course earlier in the curriculum sequence if the student is lacking major content as evaluated by the Program Director. All Health Information Technology courses completed more than three years prior to re-admission or transfer must either be challenged by exam, including passing an assessment of all skills and/or competencies covered in that course, or the course must be repeated. Withdrawal or academic failure within the Health Information Technology program will require the student to reapply as a new student. Advanced placement is dependent upon space availability.

The Health Information Technology Program Director will evaluate transferability of all Health Information Technology courses. Transfer courses must be equivalent to courses required at the receiving college in both theory and clinical experiences. The student must provide copies of course syllabi and outlines for those Health Information Technology courses taken to the Program Director. Students lacking essential content may be required to audit a portion of a course, challenge the content, demonstrate skills or repeat the course as deemed necessary. The final decision for transfer credit for Health Information Technology courses is determined by the Health Information Technology Program Director.

Applicants must submit a letter explaining the circumstances of any previous exit from any health sciences program. The letter must be sent from the previous Program Director. CCCC's Health Information Technology Program Director and Vice President of Student Services must approve students who were dismissed, expelled, or suspended for any reason. Students who withhold previous exit information may be dismissed from the program. A remediation plan may be required.

# D45380 - Social and Human Services Diploma

## Overview

**Program Code**
D45380

**Program Description**
The Human Services Technology curriculum prepares students for entry-level positions in institutions and agencies which provide social, community, and educational services. Along with core courses, students take courses which prepare them for specialization in specific human service areas.

Students will 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 will provide opportunities for application of knowledge and skills learned in the classroom.

Graduates should qualify for positions in mental health, child care, family services, social services, rehabilitation, correction, and educational agencies. Graduates choosing to continue their education may select from a variety of transfer programs at senior public and private institutions.

**Career Pathway Options**
Associate in Applied Science

**Career Community**
Health Sciences

**Program Length**
3 semesters

**Credential**
Diploma

## Program Outcomes

## Degree Maps

Social and Human Services Diploma
**Total Credits**
38

| Semester | Term | Term Credits |
|---|---|---|
| 1st Semester | Fall | 17 |

**Courses**
- ACA122 - College Transfer Success

**Term Credits** 1

**Courses**
- HSE135 - Orientation Lab I

**Term Credits** 1

**Courses**
- DDT110 - Intellectual & Developmental Disabilities

**Term Credits** 3

**Courses**
- GRO120 - Intro to Gerontology

**Term Credits** 3

**Courses**
- HSE110 - Introduction to Human Services

**Term Credits** 3

**Courses**
- MHA140 - Introduction to Mental Health

**Term Credits** 3

**Courses**
- SAB110 - Intro to Addiction & Recovery Studies

**Term Credits** 3

| Semester | Term | Term Credits |
|---|---|---|
| 2nd Semester | Spring | 15 |

**Courses**
- ENG111 - Writing and Inquiry

**Term Credits** 3

**Courses**
- HSE223 - Counseling Theories & Skills

**Term Credits** 3

**Courses**
- MHA238 - Psychopathology

**Term Credits** 3

**Courses**
- PSY150 - General Psychology

**Term Credits** 3

**Courses**
- SWK113 - Cultural Competency & Diversity

**Term Credits** 3

| Semester | Term | Term Credits |
|---|---|---|
| 3rd Semester | Summer | 6 |

**Courses**
- COM110 - Introduction to Communication

**Term Credits** 3

**Courses**
- SOC210 - Introduction to Sociology

**Term Credits** 3

# D45400 - Medical Assisting Diploma

## Overview

**Program Code**
D45400

The Medical Assisting curriculum prepares multi-skilled health care professionals qualified to perform administrative, clinical, and laboratory procedures.

Course work includes instruction in scheduling appointments, coding and processing insurance accounts, billing, collections, computer operations; assisting with examinations/treatments, performing routine laboratory procedures, electrocardiography, supervised medication administration; and ethical/legal issues associated with patient care.

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.

## Accelerated Diploma Program Option

Diploma-level classes are offered in **eight-week semesters**, and you have the option to enroll in the accelerated program to complete your diploma in two semesters. The following courses must be completed by the final enrollment deadline: ACA 122, BIO 163, ENG 111, PSY 150, and MAT 110 ready (no co-req allowed). The following related courses are not required before applying, but completing prior to beginning the accelerated program will lessen the course load once enrolled: MED 118, MED 121, and MED 122.

**Career Pathway Options**
Diploma in Medical Assisting; Associate in Applied Science in Medical Assisting

**Career Community**
Health Sciences

**Program Length**
2 semesters, 3 semesters

**Credential**
Diploma

## Program Outcomes

## Degree Maps

Medical Assisting Diploma
**Total Credits**
45

| Semester | Term | Term Credits |
|---|---|---|
| 1st Semester | Fall | 17 |

**Courses**
- ACA122 - College Transfer Success

**Term Credits** 1

**Courses**
- BIO163 - Basic Anatomy & Physiology

**Term Credits** 5

**Courses**
- MED110 - Orientation to Medical Assisting

**Term Credits** 1

**Courses**
- MED121 - Medical Terminology I

**Term Credits** 3

**Courses**
- MED130 - Administrative Office Procedures I

**Term Credits** 2

**Courses**
- MED140 - Examining Room Procedures I

**Term Credits** 5

| Semester | Term | Term Credits |
|---|---|---|
| 2nd Semester | Spring | 18 |

**Courses**
- ENG111 - Writing and Inquiry

**Term Credits** 3

**Courses**
- MED118 - Medical Law and Ethics

**Term Credits** 2

**Courses**
- MED122 - Medical Terminology II

**Term Credits** 3

**Courses**
- MED150 - Laboratory Procedures I

**Term Credits** 5

**Courses**
- MED240 - Examining Room Procedures II

**Term Credits** 5

| Semester | Term | Term Credits |
|---|---|---|
| 3rd Semester | Summer | 10 |

**Courses**
- PSY150 - General Psychology

**Term Credits** 3

**Courses**
- MED260 - MED Clinical Practicum

**Term Credits** 5

**Courses**
- MED264 - Medical Assisting Overview

**Term Credits** 2

Medical Assisting Accelerated Diploma Program, Limited Enrollment
**Total Credits**
33

| Semester | Term | Term Credits |
|---|---|---|
| 1st 8 Weeks | Fall | 9 |

**Courses**
- MED121 - Medical Terminology I

**Term Credits** 3

**Courses**
- MED110 - Orientation to Medical Assisting

**Term Credits** 1

**Courses**
- MED140 - Examining Room Procedures I

**Term Credits** 5

| Semester | Term | Term Credits |
|---|---|---|
| 2nd 8 Weeks | Fall | 8 |

**Courses**
- MED122 - Medical Terminology II

**Term Credits** 3

**Courses**
- MED150 - Laboratory Procedures I

**Term Credits** 5

| Semester | Term | Term Credits |
|---|---|---|
| 3rd 8 Weeks | Spring | 9 |

**Courses**
- MED118 - Medical Law and Ethics

**Term Credits** 2

**Courses**
- MED130 - Administrative Office Procedures I

**Term Credits** 2

**Courses**
- MED240 - Examining Room Procedures II

**Term Credits** 5

| Semester | Term | Term Credits |
|---|---|---|
| 4th 8 Weeks | Spring | 7 |

**Courses**
- MED264 - Medical Assisting Overview

**Term Credits** 2

**Courses**
- MED260 - MED Clinical Practicum

**Term Credits** 5

## Limited Enrollment Program Information

The Medical Assisting Accelerated program is limited-enrollment and accepts 13 students per year.

**A. PROGRAM SPECIFIC ENTRANCE STANDARDS:**

**Admissions Process**

The student may apply to the Medical Assisting program once minimum admissions criteria are met. This includes the following:

- Minimum 2.0 GPA
- All transcripts received - high school and past colleges
- Eligible to take ENG and MAT without a co-requisite.

**Placement Test Scores**

Students must be eligible to take their gateway Math and English course in order to be eligible to apply. This can be achieved through a High School Unweighted GPA of 2.6 or higher or by presenting acceptable test scores such as SAT, ACT, Accuplacer, or other acceptable scores

The Medical Assisting program indicates the minimum scores required to place into ENG 111 and MAT 110. Students who have an unweighted high school GPA of 2.6 or higher, have met Multiple Measures for Placement or who have earned appropriate transfer credit in English, Math, or developmental courses with a C, P2 for English, or P1 for Math, or higher may be exempt from placement testing.

**GPA**

Students must be in good academic standing upon applying to health science programs. Good academic standing is defined as having a 2.0 GPA in the most recent semester attempted as well as maintaining a 2.0 cumulative GPA.

**The Test of English as a Foreign Language (TOEFL)**

TOEFL scores are required for any naturalized or non-US citizens who speak English as their second language. This test provides evidence of adequate proficiency in the English language. All test scores must be less than five years old. The minimum acceptable TOEFL scores are based on the following formats: TOEFL iBT Total Score - **80** or higher

TOEFL Essential Overall Band Score: **8** or higher. The test is offered at multiple testing sites nationally or can be taken online and is at the student's expense.

**B. REQUIREMENTS AFTER ACCEPTANCE:**

**Criminal Background Check/Drug Screening**

A criminal background check and drug screening will be required for all accepted Health Sciences Clinical affiliates will review criminal background reports and drug screenings of students and reserve the right to accept or deny any students based on their consideration of these reports. Negative reports and/or failed screenings can preclude a student from attending the clinical portion of their prescribed program and thus, will result in the student's exit from the program. Students are subject to criminal background check and drug screening at any time during a clinical rotation. Clinical agencies reserve the right to require additional background checks and drug screens.

**Medical Forms/Immunizations**

Applicants are required to submit a completed college approved student medical health form to the required document tracking system by the assigned date. The student medical form must include satisfactory health history, physical examination, and immunization report. Failure to submit the required information by the assigned date will result in loss of Medical Assisting admission status and class space will be assigned to another applicant.

**BLS Provider CPR**

CPR Certification by the American Heart Association (AHA) in BLS Provider (Basic Life Support including CPR and AED) that includes both performance and testing of criteria is required prior to clinical rotations. Students are responsible for keeping their CPR certification current throughout the duration of the program.

**Mandatory Orientation Session**

Accepted students must attend a mandatory orientation session with the Medical Assisting Program.

**Liability/Malpractice Insurance**

Malpractice insurance is required for health sciences students and is assessed as a student fee.

**Transportation/Additional Class/Course Materials**

Health Sciences students are responsible for their own transportation to off-campus clinical/learning sites. Materials other than textbooks will be required and are purchased at student's expense.

**Technical Standards**

The Health Sciences programs are physically demanding. Students will be expected to perform lifting, pushing, pulling, and carrying tasks to successfully practice in a lab setting, complete clinical affiliations, and safely treat patients. For more details, please refer to each program of study's physical requirements and technical standards.

**Academic Standards**

Upon official acceptance, Health Sciences students are required to maintain the necessary GPA requirements for entry. Students cannot enter a Health Sciences program while on academic suspension. Health Sciences students must achieve a grade of "C" or higher in their Health Science courses. Students may withdraw or be withdrawn from a Health Sciences course. However, the student will not be allowed to matriculate through their program of study. Readmission to the program will be required and readmission will be awarded based on admissions criteria completion, policy on readmission, and space availability. Students completing readmission must meet with the Education Navigator counselor to review their file.

**Program Specific Academic Standards:**

See additional Program Specific Standards in the Medical Assisting Student Handbook and specific Medical Assisting course syllabus.

Medical Assisting and progressive related courses must be taken in succession as they appear in the curriculum guide. Medical Assisting students must adhere to the other policies set forth in the Medical Assisting Student Handbook.

**C. RE-ADMISSION OR TRANSFER INTO THE MEDICAL ASSISTING PROGRAM:**

The student must qualify under the admission criteria in effect at time of readmission or transfer. A student may be required to re-enter a Medical Assisting course earlier in the curriculum sequence if the student is lacking major content as evaluated by the Program Director. All Medical Assisting courses completed more than three years prior to re-admission or transfer must either be challenged by exam, including passing an assessment of all skills and/or competencies covered in that course, or the course must be repeated. Withdrawal or academic failure within the Medical Assisting program will require the student to reapply as a new student. Advanced placement is dependent upon space availability.

The Medical Assisting Program Director will evaluate transferability of all Medical Assisting courses. Transfer courses must be equivalent to courses required at the receiving college in both theory and clinical experiences. The student must provide copies of course syllabi and outlines for those Medical Assisting courses taken to the Program Director. Students lacking essential content may be required to audit a portion of a course, challenge the content, demonstrate skills or repeat the course as deemed necessary. The final decision for transfer credit for Medical Assisting courses is determined by the Medical Assisting Program Director.

Applicants must submit a letter explaining the circumstances of any previous exit from any health sciences program. The letter must be sent from the previous Program Director. CCCC's Medical Assisting Program Director and Vice President of Student Services must approve students who were dismissed, expelled, or suspended for any reason. Students who withhold previous exit information may be dismissed from the program. A remediation plan may be required.

# D45530 - Advanced Medical Coding Diploma

## Overview

**Program Code**
D45530

**Program Description**
The Advanced Medical Coding curriculum provides the didactic and clinical experience necessary to become competent credentialed coders. Coursework includes reimbursement, advanced International Classification of Diseases-10th Revision-Clinical Modification/Procedure Coding System (ICD-10-CM/PCS), Current Procedural Terminology (CPT), and Healthcare Common Procedure Coding System (HCPCS). Graduates may be eligible to take either of the Certified Coding Specialist exams: the Certified Coding Specialist and/or the Certified Coding Specialist-Physician Based (CCS/CCS-P). Individuals entering this curriculum must hold a minimum of an associate's degree in a healthcare field or health informatics from a regionally accredited college or university.

**Credential**
Diploma

# D45630 - Health and Fitness Science Diploma

## Overview

**Program Code**
D45630

**Program Description**
The Health and Fitness Science program is designed to provide students with the knowledge and skills necessary for employment in the fitness and exercise industry.

Students will be trained in exercise science and be able to administer basic fitness tests and health risk appraisals, teach specific exercise and fitness classes and provide instruction in the proper use of exercise equipment and facilities.

Graduates should qualify for employment opportunities in commercial fitness clubs, YMCA's/YWCA's, wellness programs in business and industry, Parks & Recreation Departments and other organizations implementing exercise & fitness programs.

**Career Pathway Options**
Associate in Applied Science Degree in Health and Fitness Science, Diploma, Certificate

**Career Community**
Health Sciences

**Program Length**
3 semesters

**Credential**
Diploma

## Program Outcomes

## Degree Maps

Health & Fitness Science, Diploma
**Total Credits**
45

| Semester | Term | Term Credits |
|---|---|---|
| 1st Semester | Fall | 18 |

**Courses**
- ACA122 - College Transfer Success

**Term Credits** 1

**Courses**
- BIO168 - Anatomy and Physiology I

**Term Credits** 4

**Courses**
- ENG111 - Writing and Inquiry

**Term Credits** 3

**Courses**
- HEA112 - First Aid & CPR

**Term Credits** 2

**Courses**
- HFS110 - Exercise Science

**Term Credits** 4

**Courses**
- HFS111 - Fitness & Exercise Testing I

**Term Credits** 4

| Semester | Term | Term Credits |
|---|---|---|
| 2nd Semester | Spring | 17 |

**Courses**
- BIO169 - Anatomy and Physiology II

**Term Credits** 4

**Courses**
- HFS116 - Prevention & Care of Exercise Injuries

**Term Credits** 3

**Courses**
- HFS120 - Group Exercise Instruction

**Term Credits** 3

**Courses**
- HFS210 - Personal Training

**Term Credits** 3

**Courses**
- PED117 - Weight Training I

**Term Credits** 1

**Courses**
- PSY150 - General Psychology

**Term Credits** 3

| Semester | Term | Term Credits |
|---|---|---|
| 3rd Semester | Summer | 10 |

**Courses**
- BIO155 - Nutrition

**Term Credits** 3

**Courses**
- HFS218 - Lifestyle Change & Wellness

**Term Credits** 4

**Courses**
- PED110 - Fit and Well for Life

**Term Credits** 2

**Courses**

- PED113 - Aerobics I
  **OR**
- PED122 - Yoga I

**Term Credits** 1

# D45660 - Practical Nursing Diploma

## Overview

**Program Code**
D45660

**Program Description**
The Practical Nursing curriculum provides knowledge and skills to integrate safety and quality into nursing care to meet the needs of the holistic individual which impact health, quality of life, and achievement of potential.

Course work includes and builds upon the domains of healthcare, nursing practice, and the holistic individual. Content emphasizes safe, individualized nursing care and participation in the interdisciplinary team while employing evidence-based practice, quality improvement, and informatics.

Graduates are eligible to apply to take the National Council Licensure Examination (NCLEX-PN) which is required for practice as a Licensed Practical Nurse. Employment opportunities include hospitals, rehabilitation/long term care/home health facilities, clinics, and physicians' offices.

**Career Pathway Options**
Diploma in Practical Nursing

**Career Community**
Health Sciences

**Program Length**
3 semesters

**Credential**
Diploma

## Program Outcomes

## Degree Maps

Practical Nursing Diploma
**Total Credits**
45

| Semester | Term | Term Credits |
|---|---|---|
| 1st Semester | Fall | 19 |

**Courses**

- ACA122 - College Transfer Success

**Term Credits** 1

**Courses**

- BIO168 - Anatomy and Physiology I

**Term Credits** 4

**Courses**

- NUR101 - Practical Nursing I

**Term Credits** 11

**Courses**

- PSY150 - General Psychology

**Term Credits** 3

| Semester | Term | Term Credits |
|---|---|---|
| 2nd Semester | Spring | 17 |

**Courses**

- BIO169 - Anatomy and Physiology II

**Term Credits** 4

**Courses**

- ENG111 - Writing and Inquiry

**Term Credits** 3

**Courses**

- NUR102 - Practical Nursing II

**Term Credits** 10

| Semester | Term | Term Credits |
|---|---|---|
| 3rd Semester | Summer | 9 |

**Courses**

- NUR103 - Practical Nursing III

**Term Credits** 9

## Limited Enrollment Program Information

**Limited Enrollment Curriculum:**

The Practical Nursing program is a limited enrollment curriculum and program applicants are accepted based upon a competitive admissions process. Admission criteria for the Practical Nursing program are reviewed annually and are subject to change. Enrollment is limited to the number of approved spaces allocated by the North Carolina Board of Nursing.

**A. PROGRAM SPECIFIC ENTRANCE STANDARDS:**

**Admission**

A student may apply to the Practical Nursing Program once minimum admissions criteria are met.

Prospective applicants are required to complete the Health Sciences information session as well as contact their Education Navigator prior to developing a plan for completing minimum requirements. The Education Navigator will review each applicant's progress, and provide further guidance once all minimum admission requirements are met.

Once an applicant has completed all general admissions criteria and all Practical Nursing Program entrance requirements, they must submit a completed Limited Enrollment Application. Applicants who meet all requirements will be ranked according to the order in which they applied.

During the initial consideration, applicants will have an opportunity to indicate first and second choice programs when completing the Limited Enrollment Application. If seats do not fill after the initial consideration and after second choice candidates are considered, applicants will be admitted on a first qualified, first accepted basis up until the date of the required mandatory health science orientation.

Applicants who do not gain entry but want to gain entry in a future year do not need to resubmit their application. Applicants will remain on the active applicant list as long as they are interested in being considered for the program.

Applicants must also submit a completed "Statement of Good Standing Form" explaining the circumstances of any previous exit from any health science program. The letter must be sent from the program director at the time of the student's previous enrollment. CCCC's Nursing Department Chair and Vice President of Student Services must approve students who were dismissed, expelled, or suspended for any reason. Students who withhold previous exit information may be dismissed from the program.

It is the applicant's responsibility to ensure that requirements are met by the established deadline.

More information can be found on the Limited Enrollment Website.

**Placement Test Scores**

Students must be eligible to take their gateway Math and English course in order to be eligible to apply. This can be achieved through a High School Unweighted GPA of 2.6 or higher or by presenting acceptable test scores such as SAT, ACT, Accuplacer, or other acceptable scores

The checklist for the Medical Sonography Program indicates the minimum scores required to place into ENG 111 and MAT 110. Students who have an unweighted high school GPA of 2.6 or higher, have met Multiple Measures for Placement or who have earned appropriate transfer credit in English, Math, or developmental courses with a C, P2 for English, or P1 for Math, or higher may be exempt from placement testing.

**GPA**

Students must be in good academic standing upon applying to health science programs. Good academic standing is defined as having a 2.5 GPA or higher based on the general education courses for the program. Students can apply if they have a 2.0-2.5 GPA but will be placed on an alternate list. Alternates will be considered if there are not enough applicants to fill all seats. These GPA requirements must be maintained at the time of entering the program from a secondary or post-secondary institution.

**TEAS (Test of Essential Academic Skills)**

All required college placement tests or developmental courses must be successfully completed before the applicant may attempt the Test of Essential Academic Skills (TEAS). Students must obtain approval from an Education Navigator to take the TEAS and pay the required testing fee.

The TEAS will be administered on scheduled testing dates. Each applicant may take the exam three times within three years. Only the two most recent attempts will be used. Students are encouraged to complete remediation between attempts. Remediation options are as follows: developmental courses, college credit courses, and/or continuing education courses or other strategies related to the subject areas. TEAS scores are valid for three years and must be current when submitting a Nursing Program application. Students must earn a reading score of 58.7 or better to apply for the Practical Nursing program.

**General Education Courses**

The following courses are required to be completed with a grade of "B" or better prior to applying: BIO-168, & BIO-169. The following courses are required to be completed with a grade of "C" or better prior to applying: ENG-111, PSY-150, & ACA-122.

**The Test of English as a Foreign Language (TOEFL)**

TOEFL scores are required for any naturalized or non-US citizens who speak English as their second language. This test provides evidence of adequate proficiency in the English language. All test scores must be less than five years old. The minimum acceptable TOEFL scores are based on the following formats: TOEFL iBT Total Score - **80** or higher TOEFL Essential Overall Band Score: **8** or higher. The test is offered at multiple testing sites nationally or can be taken online and is at the student's expense.

**Nurse Aide I Registry Requirement**

Prior Health Care Program completion with appropriate listing/licensure is required for consideration at the designated entry points in the nursing programs:

- Provide proof of current active listing on the North Carolina Department of Health and Human Services (NC DHHS) Nurse Aide I Registry with no substantiated finding of abuse, neglect, or misappropriation of resident property in a nursing home or other health care facility. This active, non-restricted listing must be maintained as of the start of the Practical Nursing Program. Candidates will need to renew their certification if it is scheduled to expire before the start of the nursing program.
- Provide proof of completion of NC state approved Nurse Aide I course (see approved schools at NCDHHS). The Department Chair of Nursing will review NAI programs completed outside of NC. NC DHHS-approved NAI courses are preferred, however the CCCC Nursing Department Chair will determine, on a case-by-case basis, if a course administered by another state or agency meets the requirement.

***OR***

High School Medical Careers I & II courses with a grade of "C" or better within the last 5 years.

***OR***

Nurse Aide I work experience of at least 250 hours with the last 6 months in skilled nursing care or in an acute care hospital. (Required to have documentation of hours worked, service rendered and supervisor's name on company letterhead.)

**B. REQUIREMENTS AFTER ACCEPTANCE:**

**Criminal Background Check/Drug Screening**

A criminal background check and drug screening will be required for all accepted Health Sciences students. Clinical affiliates will review criminal background reports and drug screenings of students and reserve the right to accept or deny any students based on their consideration of these reports. Negative reports and/or failed screenings can preclude a student from attending the clinical portion of their prescribed program and thus, will result in the student's exit from the program. Students are subject to criminal background check and drug screening at any time during a course with a clinical rotation. Clinical agencies reserve the right to require additional background checks and drug screens. Associated fees are the student's responsibility.

**Medical Forms/Immunizations**

Applicants are required to submit a completed college approved student medical health form to the required document tracking system by the assigned date. The student medical form must include satisfactory health history, physical examination, and immunization report. Failure to submit the required information by the assigned date will result in loss of Practical Nursing admission status and class space will be assigned to another applicant.

**BLS Provider CPR**

CPR Certification by the American Heart Association (AHA) in BLS Provider (Basic Life Support including CPR and AED) that includes both performance and testing of criteria is required prior to clinical rotations. Students are responsible for keeping their CPR certification current throughout the duration of the program.

**Mandatory Orientation Session**

When notified of acceptance, applicants must attend a mandatory orientation session with the Practical Nursing department.

**Liability/Malpractice Insurance**

Malpractice insurance is required for health sciences students and is assessed as a student fee.

**Transportation/Additional Class/Course Materials**

Health Sciences students are responsible for their own transportation to off-campus clinical/learning sites. Materials other than textbooks will be required and are purchased at student's expense. Students may be required to attend classes on alternate dates depending on availability of resources to meet the objectives of the course. Students will be notified in advance at the earliest possible time.

**Technical Standards**

The Health Sciences programs are physically demanding. Students will be expected to perform lifting, pushing, pulling, and carrying tasks to successfully practice in a lab setting, complete clinical affiliations, and safely treat patients. For more details, please refer to each program of study's physical requirements and technical standards.

**Board of Nursing Standards**

Students who enroll in the nursing program should be aware that the application for licensure at the completion of the program might be denied or restricted by the North Carolina Board of Nursing. As the regulatory agency, the Board of Nursing does not become involved in reviewing the applicant's conviction record until such time as application is made to take the national licensure examination. NC Board of Nursing

**Academic Standards**

Upon official acceptance, Health Sciences students are required to maintain the necessary GPA requirements for entry. Students cannot enter a Health Sciences program while on academic suspension. The nursing program requires a grading scale that is different from the general college requirement. Students must achieve a final grade of "78" or higher in their NUR Nursing courses.

Students may withdraw or be withdrawn from a Health Sciences course. However, the student will not be allowed to matriculate through their program of study. Reapplication to the program will be required and readmission will be awarded based on admissions criteria completion, policy on readmission, and space availability. Students completing readmission must meet with the Education Navigator to review their file.

**Program Specific Academic Standards**

See additional Program Specific Standards in the Nursing Student Policies Handbook and specific Practical Nursing course syllabus.

Practical Nursing and progressive related courses must be taken in succession as they appear in the curriculum guide. guide. Practical Nursing students must adhere to the other policies set forth in the Nursing Student Policies Handbook.

Nursing curriculum students once enrolled must maintain an overall and semester grade point average of 2.0 or better, and must have a grade of "C" or better in all nursing courses and co-requisites required in order to graduate. Students are encouraged to earn higher grades to help ensure that they are prepared to pass the National Council Licensure Examination (NCLEX), which is required to practice as a nurse. See individual course syllabus for additional grading information.

**C. RE-ADMISSION OR TRANSFER INTO THE PRACTICAL NURSING PROGRAM**

The student must qualify under the admission criteria in effect at time of readmission or transfer. A student may be required to re-enter a Practical Nursing course earlier in the curriculum sequence if the student is lacking major content. All Practical Nursing courses completed more than three years prior to re-admission or transfer must either be challenged by exam, including passing an assessment of all skills and/or competencies covered in that course, or the course must be repeated. Withdrawal or academic failure within the Practical Nursing Program will require the student to reapply. Advanced placement is dependent upon space availability. The Nursing Department Chair will evaluate transferability of all Practical Nursing courses. Transfer courses must be equivalent to courses required at the receiving college in theory and clinical experiences. The student must provide copies of course syllabi and outlines for those Practical Nursing courses to the department chairperson. Students lacking essential content may be required to audit a portion of a course, challenge the content, demonstrate skills, or repeat the course as deemed necessary. The final decision for transfer credit for Practical Nursing courses is determined by the Nursing Department Chair

Applicants must submit a letter explaining the circumstances of any previous exit from any health sciences program. The letter must be sent from the previous Program Director. CCCC's Nursing Department Chair and Vice President of Student Services must approve students who were dismissed, expelled, or suspended for any reason. Students who withhold previous exit information may be dismissed from the program. Students who have been unsuccessful in two attempts in the nursing program are able to reapply for entry in the first NUR program course.

# D50210 - Computer-Integrated Machining Diploma

## Overview

**Program Code**
D50210

**Credential**
Diploma

## Degree Maps

Computer-Integrated Machining Diploma
**Total Credits**
38

| Semester | Term | Term Credits |
|---|---|---|
| 1st Semester | Fall | 17 |

**Courses**
- BPR111 - Print Reading

**Term Credits** 2

**Courses**
- CIS110 - Introduction to Computers

**Term Credits** 3

**Courses**
- MAC111 - Machining Technology I

**Term Credits** 6

**Courses**
- MAC171 - Measure/Material and Safety

**Term Credits** 1

**Courses**
- MEC142 - Physical Metallurgy

**Term Credits** 2

**Courses**
- MAT110 - Mathematical Measurement and Literacy

**Term Credits** 3

| Semester | Term | Term Credits |
|---|---|---|
| 2nd Semester | Spring | 15 |

**Courses**
- BPR121 - Blueprint Reading-Mechanical

**Term Credits** 2

**Courses**
- MAC112 - Machining Technology II

**Term Credits** 6

**Courses**
- MAC124 - CNC Milling

**Term Credits** 2

**Courses**
- MAC152 - Advanced Machining Calculations

**Term Credits** 2

**Courses**
- ENG102 - Applied Communications II
  **OR**
- ENG110 - Freshman Composition

**Term Credits** 3

| Semester | Term | Term Credits |
|---|---|---|
| 3rd Semester | Summer | 6 |

**Courses**
- MAC113 - Machining Technology III

**Term Credits** 6

**Courses**
- Humanities/Fine Arts Elective (Generic)

**Term Credits** -

## Approved AAS Electives

**Approved AAS Electives (C-L-SHC)**

| APPROVED HUMANITIES/FINE ARTS ELECTIVES | APPROVED SOCIAL/BEHAVIORAL SCIENCE ELECTIVES |
|---|---|
| ART 111 Art Appreciation 3-0-3 | ANT 210 General Anthropology 3-0-3 |
| ART 114 Art History Survey I 3-0-3 | ANT 220 Cultural Anthropology 3-0-3 |
| ART 115 Art History Survey II 3-0-3 | ECO 151 Survey of Economics 3-0-3 |
| DRA 111 Theatre Appreciation 3-0-3 | ECO 251 Principles of Microeconomics 3-0-3 |
| ENG 125 Creative Writing I 3-0-3 | ECO 252 Principles of Macroeconomics 3-0-3 |
| ENG 231 American Literature I 3-0-3 | HIS 111 World Civilization I 3-0-3 |
| ENG 232 American Literature II 3-0-3 | HIS 112 World Civilization II 3-0-3 |
| *ENG 241 British Literature I 3-0-3 | HIS 131 American History I 3-0-3 |
| *ENG 242 British Literature II 3-0-3 | HIS 132 American History II 3-0-3 |
| HUM 110 Technology and Society 3-0-3 | HIS 222 African-American History I 3-0-3 |
| HUM 115 Critical Thinking 3-0-3 | HIS 223 African-American History II 3-0-3 |
| HUM 120 Cultural Studies 3-0-3 | HIS 226 The Civil War 3-0-3 |
| HUM 122 Southern Culture 3-0-3 | HIS 236 North Carolina History 3-0-3 |
| HUM 150 American Women's Studies 3-0-3 | POL 120 American Government 3-0-3 |
| HUM 160 Introduction to Film 2-2-3 | PSY 150 General Psychology 3-0-3 |
| MUS 110 Music Appreciation 3-0-3 | PSY 237 Social Psychology 3-0-3 |
| MUS 112 Introduction to Jazz 3-0-3 | PSY 241 Developmental Psychology 3-0-3 |
| PHI 240 Introduction to Ethics 3-0-3 | PSY 246 Adolescent Psychology 3-0-3 |
| REL 110 World Religions 3-0-3 | PSY 281 Abnormal Psychology 3-0-3 |
| REL 211 Intro to Old Testament 3-0-3 | SOC 210 Introduction to Sociology 3-0-3 |
| REL 212 Intro to New Testament 3-0-3 | SOC 213 Sociology of the Family 3-0-3 |
| | SOC 220 Social Problems 3-0-3 |
| | SOC 225 Social Diversity 3-0-3 |
| | SOC 232 Social Context of Aging 3-0-3 |
| | SOC 240 Social Psychology3-0-3 |
| *Not applicable for some health sciences programs.* | |

# D50240 - Industrial Systems Technology Diploma

## Overview

**Program Code**
D50240

**Career Pathway Options**
Associate in Applied Science in Industrial Systems Technology (Higher entrance standards required); Diploma in Industrial Systems Maintenance Technology

**Career Community**
Applied Technologies

**Program Length**
3 semesters

**Credential**
Diploma

## Program Outcomes

## Degree Maps

Industrial Systems Diploma
**Total Credits**
45

| Semester | Term | Term Credits |
|---|---|---|
| 1st Semester | Fall | 17 |

**Courses**
- BPR111 - Print Reading

**Term Credits** 2

**Courses**
- CIS111 - Basic PC Literacy

**Term Credits** 2

**Courses**
- ELC112 - DC/AC Electricity

**Term Credits** 5

**Courses**
- MEC111 - Machine Processes I

**Term Credits** 3

**Courses**
- MNT110 - Introduction to Maintenance Procedures

**Term Credits** 2

**Courses**
- Humanities/Fine Arts Elective (Generic)

**Term Credits** 3

| Semester | Term | Term Credits |
|---|---|---|
| 2nd Semester | Spring | 18 |

**Courses**
- ELC128 - Introduction to Programmable Logic Controller

**Term Credits** 3

**Courses**
- ENG111 - Writing and Inquiry

**Term Credits** 3

**Courses**
- MNT111 - Maintenance Practices

**Term Credits** 3

**Courses**
- PHY121 - Applied Physics I

**Term Credits** 4

**Courses**
- WLD112 - Basic Welding Processes

**Term Credits** 2

**Courses**
- WLD117 - Industrial SMAW

**Term Credits** 3

| Semester | Term | Term Credits |
|---|---|---|
| 3rd Semester | Summer | 10 |

**Courses**
- AHR120 - HVACR Maintenance

**Term Credits** 2

**Courses**
- ELN260 - Programmable Logic Controllers

**Term Credits** 4

**Courses**
- ISC110 - Workplace Safety

**Term Credits** 1

**Courses**
- HYD110 - Hydraulics/Pneumatics I

**Term Credits** 3

## Approved AAS Electives

**Approved AAS Electives (C-L-SHC)**

| APPROVED HUMANITIES/FINE ARTS ELECTIVES | APPROVED SOCIAL/BEHAVIORAL SCIENCE ELECTIVES |
|---|---|
| ART 111 Art Appreciation 3-0-3 | ANT 210 General Anthropology 3-0-3 |
| ART 114 Art History Survey I 3-0-3 | ANT 220 Cultural Anthropology 3-0-3 |
| ART 115 Art History Survey II 3-0-3 | ECO 151 Survey of Economics 3-0-3 |
| DRA 111 Theatre Appreciation 3-0-3 | ECO 251 Principles of Microeconomics 3-0-3 |
| ENG 125 Creative Writing I 3-0-3 | ECO 252 Principles of Macroeconomics 3-0-3 |
| ENG 231 American Literature I 3-0-3 | HIS 111 World Civilization I 3-0-3 |
| ENG 232 American Literature II 3-0-3 | HIS 112 World Civilization II 3-0-3 |
| *ENG 241 British Literature I 3-0-3 | HIS 131 American History I 3-0-3 |
| *ENG 242 British Literature II 3-0-3 | HIS 132 American History II 3-0-3 |
| HUM 110 Technology and Society 3-0-3 | HIS 222 African-American History I 3-0-3 |
| HUM 115 Critical Thinking 3-0-3 | HIS 223 African-American History II 3-0-3 |
| HUM 120 Cultural Studies 3-0-3 | HIS 226 The Civil War 3-0-3 |
| HUM 122 Southern Culture 3-0-3 | HIS 236 North Carolina History 3-0-3 |
| HUM 150 American Women's Studies 3-0-3 | POL 120 American Government 3-0-3 |
| HUM 160 Introduction to Film 2-2-3 | PSY 150 General Psychology 3-0-3 |
| MUS 110 Music Appreciation 3-0-3 | PSY 237 Social Psychology 3-0-3 |
| MUS 112 Introduction to Jazz 3-0-3 | PSY 241 Developmental Psychology 3-0-3 |
| PHI 240 Introduction to Ethics 3-0-3 | PSY 246 Adolescent Psychology 3-0-3 |
| REL 110 World Religions 3-0-3 | PSY 281 Abnormal Psychology 3-0-3 |
| REL 211 Intro to Old Testament 3-0-3 | SOC 210 Introduction to Sociology 3-0-3 |
| REL 212 Intro to New Testament 3-0-3 | SOC 213 Sociology of the Family 3-0-3 |
| | SOC 220 Social Problems 3-0-3 |
| | SOC 225 Social Diversity 3-0-3 |
| | SOC 232 Social Context of Aging 3-0-3 |
| *Not applicable for some health sciences programs.* | SOC 240 Social Psychology 3-0-3 |

# D50420 - Welding Technology Diploma

## Overview

**Program Code**
D50420

**Career Pathway Options**
Diploma in Welding Technology

**Career Community**
Applied Technologies

**Program Length**
4 semesters

**Credential**
Diploma

## Program Outcomes

## Degree Maps

Welding Technology Diploma
**Total Credits**
42

| Semester | Term | Term Credits |
|---|---|---|
| 1st Semester | Fall | 13 |

**Courses**
- BPR111 - Print Reading

**Term Credits** 2

**Courses**
- ISC110 - Workplace Safety

**Term Credits** 1

**Courses**
- WLD110 - Cutting Processes

**Term Credits** 2

**Courses**
- WLD115 - SMAW (Stick) Plate

**Term Credits** 5

**Courses**
- MAT110 - Mathematical Measurement and Literacy

**Term Credits** 3

| Semester | Term | Term Credits |
|---|---|---|
| 2nd Semester | Spring | 14 |

**Courses**
- WLD121 - GMAW (MIG) FCAW/Plate

**Term Credits** 4

**Courses**
- WLD131 - GTAW (TIG) Plate

**Term Credits** 4

**Courses**
- WLD141 - Symbols and Specifications

**Term Credits** 3

**Courses**
- ENG110 - Freshman Composition
  **OR**
- ENG111 - Writing and Inquiry

**Term Credits** 3

| Semester | Term | Term Credits |
|---|---|---|
| 3rd Semester | Summer | 4 |

**Courses**
- WLD116 - SMAW (stick) Plate/Pipe

**Term Credits** 4

| Semester | Term | Term Credits |
|---|---|---|
| 4th Semester | Fall | 11 |

**Courses**
- WLD151 - Fabrication I

**Term Credits** 4

**Courses**
- WLD262 - Inspection & Testing

**Term Credits** 3

**Courses**
- WLD265 - Automated Welding/Cutting

**Term Credits** 4

# D55110 - Barbering Diploma

## Overview

**Program Code**
D55110

**Career Pathway Options**
Diploma in Barbering

**Career Community**
Professional Services

**Program Length**
4 semesters

**Credential**
Diploma

## Program Outcomes

## Degree Maps

Barbering, Diploma
**Total Credits**
47

| Semester | Term | Term Credits |
|---|---|---|
| 1st Semester | Fall | 12 |

**Courses**
- BAR111 - Barbering Concepts I

**Term Credits** 4

**Courses**
- BAR112 - Barbering Clinic I

**Term Credits** 8

| Semester | Term | Term Credits |
|---|---|---|
| 2nd Semester | Spring | 12 |

**Courses**
- BAR113 - Barbering Concepts II

**Term Credits** 4

**Courses**
- BAR114 - Barbering Clinic II

**Term Credits** 8

| Semester | Term | Term Credits |
|---|---|---|
| 3rd Semester | Summer | 8 |

**Courses**
- BAR115 - Barbering Concepts III

**Term Credits** 4

**Courses**
- BAR116 - Barbering Clinic III

**Term Credits** 4

| Semester | Term | Term Credits |
|---|---|---|
| 4th Semester | Fall | 15 |

**Courses**
- BAR117 - Barbering Concepts IV

**Term Credits** 2

**Courses**
- BAR118 - Barbering Clinic IV

**Term Credits** 7

**Courses**
- ENG102 - Applied Communications II

**Term Credits** 3

**Courses**
- MAT110 - Mathematical Measurement and Literacy

**Term Credits** 3

# D55140 - Cosmetology Diploma

## Overview

**Program Code**
D55140

**Program Description**
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 will be issued a license. Employment is available in beauty salons and related businesses.

**Career Pathway Options**
Diploma in Cosmetology

**Career Community**
Professional Services

**Program Length**
4 semesters

**Credential**
Diploma

## Program Outcomes

## Degree Maps

Cosmetology Diploma
**Total Credits**
47

| Semester | Term | Term Credits |
|---|---|---|
| 1st Semester | Fall | 12 |

**Courses**
- COS111 - Cosmetology Concepts I

**Term Credits** 4

**Courses**
- COS112 - Salon I

**Term Credits** 8

| Semester | Term | Term Credits |
|---|---|---|
| 2nd Semester | Spring | 12 |

**Courses**
- COS113 - Cosmetology Concepts II

**Term Credits** 4

**Courses**
- COS114 - Salon II

**Term Credits** 8

| Semester | Term | Term Credits |
|---|---|---|
| 3rd Semester | Summer | 8 |

**Courses**
- COS115 - Cosmetology Concepts III

**Term Credits** 4

**Courses**
- COS116 - Salon III

**Term Credits** 4

| Semester | Term | Term Credits |
|---|---|---|
| 4th Semester | Fall | 15 |

**Courses**
- COS117 - Cosmetology Concepts IV

**Term Credits** 2

**Courses**
- COS118 - Salon IV

**Term Credits** 7

**Courses**
- Communications elective, select one: COM 110, COM 120, COM 231, ENG 112, ENG 114, ENG-115, or ENG 116 (Generic)

**Term Credits** 3

**Courses**
- Social/Behavioral Elective (Generic)

**Term Credits** 3

## Approved AAS Electives

**Approved AAS Electives (C-L-SHC)**

| APPROVED COMMUNICATION ELECTIVES | |
|---|---|
| COM 110 Introduction to Communication 3-0-3<br>COM 120 Intro to Interpersonal Communication 3-0-3<br>COM 231 Public Speaking 3-0-3<br>ENG-115 Oral Communications 3-0-3 | |
| **APPROVED HUMANITIES/FINE ARTS ELECTIVES** | **APPROVED SOCIAL/BEHAVIORAL SCIENCE ELECTIVES** |
| **ART 111 Art Appreciation 3-0-3**<br>**ART 114 Art History Survey I 3-0-3**<br>**ART 115 Art History Survey II 3-0-3**<br>**DRA 111 Theatre Appreciation 3-0-3**<br>**ENG 125 Creative Writing I 3-0-3**<br>**ENG 231 American Literature I 3-0-3**<br>**ENG 232 American Literature II 3-0-3**<br>***ENG 241 British Literature I 3-0-3**<br>***ENG 242 British Literature II 3-0-3**<br>**HUM 110 Technology and Society 3-0-3**<br>**HUM 115 Critical Thinking 3-0-3**<br>**HUM 120 Cultural Studies 3-0-3**<br>**HUM 122 Southern Culture 3-0-3**<br>**HUM 150 American Women's Studies 3-0-3**<br>**HUM 160 Introduction to Film 2-2-3**<br>**MUS 110 Music Appreciation 3-0-3**<br>**MUS 112 Introduction to Jazz 3-0-3**<br>**PHI 240 Introduction to Ethics 3-0-3**<br>**REL 110 World Religions 3-0-3**<br>**REL 211 Intro to Old Testament 3-0-3**<br>**REL 212 Intro to New Testament 3-0-3**<br>***Not applicable for some health sciences programs.*** | **ANT 210 General Anthropology 3-0-3**<br>**ANT 220 Cultural Anthropology 3-0-3**<br>**ECO 151 Survey of Economics 3-0-3**<br>**ECO 251 Principles of Microeconomics 3-0-3**<br>**ECO 252 Principles of Macroeconomics 3-0-3**<br>**HIS 111 World Civilization I 3-0-3**<br>**HIS 112 World Civilization II 3-0-3**<br>**HIS 131 American History I 3-0-3**<br>**HIS 132 American History II 3-0-3**<br>**HIS 222 African-American History I 3-0-3**<br>**HIS 223 African-American History II 3-0-3**<br>**HIS 226 The Civil War 3-0-3**<br>**HIS 236 North Carolina History 3-0-3**<br>**POL 120 American Government 3-0-3**<br>**PSY 150 General Psychology 3-0-3**<br>**PSY 237 Social Psychology 3-0-3**<br>**PSY 241 Developmental Psychology 3-0-3**<br>**PSY 246 Adolescent Psychology 3-0-3**<br>**PSY 281 Abnormal Psychology 3-0-3**<br>**SOC 210 Introduction to Sociology 3-0-3**<br>**SOC 213 Sociology of the Family 3-0-3**<br>**SOC 220 Social Problems 3-0-3**<br>**SOC 225 Social Diversity 3-0-3**<br>**SOC 232 Social Context of Aging 3-0-3**<br>**SOC 240 Social Psychology3-0-3** |

# D55180 - Criminal Justice Technology Diploma

## Overview

**Program Code**
D55180

**Career Pathway Options**
Associate in Applied Science in Criminal Justice Technology

**Career Community**
Public Safety

**Program Length**
3 semesters

**Credential**
Diploma

## Program Outcomes

## Degree Maps

Criminal Justice Diploma
**Total Credits**
38

| Semester | Term | Term Credits |
|---|---|---|
| 1st Semester | Fall | 13 |

**Courses**
- CJC111 - Introduction to Criminal Justice

**Term Credits** 3

**Courses**
- CJC112 - Criminology

**Term Credits** 3

**Courses**
- CJC132 - Court Procedure & Evidence

**Term Credits** 3

**Courses**
- CJC231 - Constitutional Law

**Term Credits** 3

**Courses**
- ACA122 - College Transfer Success

**Term Credits** 1

| Semester | Term | Term Credits |
|---|---|---|
| 2nd Semester | Spring | 13 |

**Courses**
- CJC131 - Criminal Law

**Term Credits** 3

**Courses**
- CJC212 - Ethics & Community Relations

**Term Credits** 3

**Courses**
- CJC221 - Investigative Principles

**Term Credits** 4

**Courses**
- ENG111 - Writing and Inquiry

**Term Credits** 3

| Semester | Term | Term Credits |
|---|---|---|
| 3rd Semester | Fall | 12 |

**Courses**
- CJC113 - Juvenile Justice

**Term Credits** 3

**Courses**
- CJC141 - Corrections

**Term Credits** 3

**Courses**
- CJC214 - Victimology

**Term Credits** 3

**Courses**
- PSY150 - General Psychology

**Term Credits** 3

# D55220 - Early Childhood Education Diploma

## Overview

**Program Code**
D55220

**Program Description**
The Early Childhood Education curriculum prepares individuals to work with children from birth through eight in diverse learning environments. Students will combine learned theories with practice in actual settings with young children under the supervision of qualified teachers.

Course work includes child growth and development; physical/nutritional needs of children; care and guidance of children; and communication skills with families and children. Students will 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.

**Career Pathway Options**
Associate in Applied Science Degree in Early Childhood Associate (Higher entrance standards required); Early Childhood Diploma

**Career Community**
Professional Services

**Program Length**
4 semesters

**Credential**
Diploma

## Program Outcomes

## Degree Maps

Early Childhood Diploma
**Total Credits**
45

| Semester | Term | Term Credits |
|---|---|---|
| 1st Semester | Fall | 13 |

**Courses**
- EDU119 - Introduction to Early Childhood Education

**Term Credits** 4

**Courses**
- EDU131 - Child, Family, and Community

**Term Credits** 3

**Courses**
- EDU144 - Child Development I

**Term Credits** 3

**Courses**
- Social/Behavioral Science Elective (Generic)

**Term Credits** 3

| Semester | Term | Term Credits |
|---|---|---|
| 2nd Semester | Spring | 16 |

**Courses**
- ACA122 - College Transfer Success

**Term Credits** 1

**Courses**
- EDU145 - Child Development II

**Term Credits** 3

**Courses**
- EDU146 - Child Guidance

**Term Credits** 3

**Courses**

- EDU151 - Creative Activities

**Term Credits** 3

**Courses**

- EDU153 - Health, Safety and Nutrition

**Term Credits** 3

**Courses**

- ENG111 - Writing and Inquiry

**Term Credits** 3

| Semester | Term | Term Credits |
|---|---|---|
| 3rd Semester | Summer | 3 |

**Courses**

- EDU221 - Children With Exceptionalities

**Term Credits** 3

| Semester | Term | Term Credits |
|---|---|---|
| 4th Semester | Fall | 13 |

**Courses**

- EDU252 - Math and Science Activities

**Term Credits** 3

**Courses**

- EDU259 - Curriculum Planning

**Term Credits** 3

**Courses**

- EDU271 - Educational Technology

**Term Credits** 3

**Courses**

- EDU284 - Early Childhood Capstone Practicum

**Term Credits** 4

## Approved AAS Electives

**Approved AAS Electives (C-L-SHC)**

| APPROVED HUMANITIES/FINE ARTS ELECTIVES | APPROVED SOCIAL/BEHAVIORAL SCIENCE ELECTIVES |
|---|---|
| ART 111 Art Appreciation 3-0-3 | ANT 210 General Anthropology 3-0-3 |
| ART 114 Art History Survey I 3-0-3 | ANT 220 Cultural Anthropology 3-0-3 |
| ART 115 Art History Survey II 3-0-3 | ECO 151 Survey of Economics 3-0-3 |
| DRA 111 Theatre Appreciation 3-0-3 | ECO 251 Principles of Microeconomics 3-0-3 |
| ENG 125 Creative Writing I 3-0-3 | ECO 252 Principles of Macroeconomics 3-0-3 |
| ENG 231 American Literature I 3-0-3 | HIS 111 World Civilization I 3-0-3 |
| ENG 232 American Literature II 3-0-3 | HIS 112 World Civilization II 3-0-3 |
| *ENG 241 British Literature I 3-0-3 | HIS 131 American History I 3-0-3 |
| *ENG 242 British Literature II 3-0-3 | HIS 132 American History II 3-0-3 |
| HUM 110 Technology and Society 3-0-3 | HIS 222 African-American History I 3-0-3 |
| HUM 115 Critical Thinking 3-0-3 | HIS 223 African-American History II 3-0-3 |
| HUM 120 Cultural Studies 3-0-3 | HIS 226 The Civil War 3-0-3 |
| HUM 122 Southern Culture 3-0-3 | HIS 236 North Carolina History 3-0-3 |
| HUM 150 American Women's Studies 3-0-3 | POL 120 American Government 3-0-3 |
| HUM 160 Introduction to Film 2-2-3 | PSY 150 General Psychology 3-0-3 |
| MUS 110 Music Appreciation 3-0-3 | PSY 237 Social Psychology 3-0-3 |
| MUS 112 Introduction to Jazz 3-0-3 | PSY 241 Developmental Psychology 3-0-3 |
| PHI 240 Introduction to Ethics 3-0-3 | PSY 246 Adolescent Psychology 3-0-3 |
| REL 110 World Religions 3-0-3 | PSY 281 Abnormal Psychology 3-0-3 |
| REL 211 Intro to Old Testament 3-0-3 | SOC 210 Introduction to Sociology 3-0-3 |
| REL 212 Intro to New Testament 3-0-3 | SOC 213 Sociology of the Family 3-0-3 |
| | SOC 220 Social Problems 3-0-3 |
| | SOC 225 Social Diversity 3-0-3 |
| | SOC 232 Social Context of Aging 3-0-3 |
| *Not applicable for some health sciences programs.* | SOC 240 Social Psychology 3-0-3 |

# D55310 - Library and Information Technology Diploma

## Overview

**Program Code**
D55310

The Diploma in Library and Information Technology curriculum is designed to prepare graduates for employment with organizations that use technology to process, manage, and communicate information. Students will complete courses designed to develop proficiency in the use of electronic resources for records management, information resources and services, acquisition and collection management, cataloging and classifying, and public service.

All credits earned in this diploma program will transfer into the Associate in Applied Science Degree in Library and Information Technology provided the student meets the higher entrance standards.

**Career Community**
STEM

**Program Length**
2 semesters

**Credential**
Diploma

## Degree Maps

Library & Information Technology, Diploma
**Total Credits**
38

| Semester | Term | Term Credits |
|---|---|---|
| 1st Semester | Fall | 19 |

**Courses**
- CIS110 - Introduction to Computers

**Term Credits** 3

**Courses**
- LIB110 - Introduction to Libraries

**Term Credits** 3

**Courses**
- LIB111 - Library Info Resources and Services

**Term Credits** 3

**Courses**
- LIB113 - Library Cataloging & Classifying

**Term Credits** 3

**Courses**
- ACA122 - College Transfer Success

**Term Credits** 1

**Courses**
- WEB214 - Social Media

**Term Credits** 3

**Courses**
- LIB212 - Library Services/Special Needs
  **OR**
- LIB214 - Library Services/Children

**Term Credits** 3

| Semester | Term | Term Credits |
|---|---|---|
| 2nd Semester | Spring | 19 |

**Courses**
- ENG111 - Writing and Inquiry

**Term Credits** 3

**Courses**
- LIB112 - Library Collection Develop/Acquisitions

**Term Credits** 3

**Courses**
- LIB114 - Library Public Service Operations

**Term Credits** 3

**Courses**
- WEB110 - Web Development Fundamentals

**Term Credits** 3

**Courses**
- DBA110 - Database Concepts

**Term Credits** 3

**Courses**
- WBL111 - Work-Based Learning I

**Term Credits** 1

**Courses**
- Social/Behavioral Science Elective (Generic)

**Term Credits** 3

## Approved AAS Electives

**Approved AAS Electives (C-L-SHC)**

| APPROVED HUMANITIES/FINE ARTS ELECTIVES | APPROVED SOCIAL/BEHAVIORAL SCIENCE ELECTIVES |
|---|---|
| ART 111 Art Appreciation 3-0-3 | ANT 210 General Anthropology 3-0-3 |
| ART 114 Art History Survey I 3-0-3 | ANT 220 Cultural Anthropology 3-0-3 |
| ART 115 Art History Survey II 3-0-3 | ECO 151 Survey of Economics 3-0-3 |
| DRA 111 Theatre Appreciation 3-0-3 | ECO 251 Principles of Microeconomics 3-0-3 |
| ENG 125 Creative Writing I 3-0-3 | ECO 252 Principles of Macroeconomics 3-0-3 |
| ENG 231 American Literature I 3-0-3 | HIS 111 World Civilization I 3-0-3 |
| ENG 232 American Literature II 3-0-3 | HIS 112 World Civilization II 3-0-3 |
| *ENG 241 British Literature I 3-0-3 | HIS 131 American History I 3-0-3 |
| *ENG 242 British Literature II 3-0-3 | HIS 132 American History II 3-0-3 |
| HUM 110 Technology and Society 3-0-3 | HIS 222 African-American History I 3-0-3 |
| HUM 115 Critical Thinking 3-0-3 | HIS 223 African-American History II 3-0-3 |
| HUM 120 Cultural Studies 3-0-3 | HIS 226 The Civil War 3-0-3 |
| HUM 122 Southern Culture 3-0-3 | HIS 236 North Carolina History 3-0-3 |
| HUM 150 American Women's Studies 3-0-3 | POL 120 American Government 3-0-3 |
| HUM 160 Introduction to Film 2-2-3 | PSY 150 General Psychology 3-0-3 |
| MUS 110 Music Appreciation 3-0-3 | PSY 237 Social Psychology 3-0-3 |
| MUS 112 Introduction to Jazz 3-0-3 | PSY 241 Developmental Psychology 3-0-3 |
| PHI 240 Introduction to Ethics 3-0-3 | PSY 246 Adolescent Psychology 3-0-3 |
| REL 110 World Religions 3-0-3 | PSY 281 Abnormal Psychology 3-0-3 |
| REL 211 Intro to Old Testament 3-0-3 | SOC 210 Introduction to Sociology 3-0-3 |
| REL 212 Intro to New Testament 3-0-3 | SOC 213 Sociology of the Family 3-0-3 |
| | SOC 220 Social Problems 3-0-3 |
| | SOC 225 Social Diversity 3-0-3 |
| | SOC 232 Social Context of Aging 3-0-3 |
| *Not applicable for some health sciences programs.* | SOC 240 Social Psychology 3-0-3 |

# D60130 - Collision Repair and Refinishing Technology Diploma

## Overview

**Program Code**
D60130

**Program Description**
Pathway Description: Curriculums in the Mobile Equipment Maintenance and Repair pathway prepare 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. Course work may include transportation systems theory, braking systems, climate control, design parameters, drive trains, electrical/electronic systems, engine repair, engine performance, environmental regulations, materials, product finish, safety, steering/suspension, transmission/transaxles, and sustainable transportation, depending on the program major area chosen. Graduates of this pathway should be prepared to take professional licensure exams, which correspond to certain programs of study, and to enter careers as entry-level technicians in the transportation industry.

Collision Repair and Refinishing Technology: A program that prepares individuals to apply technical knowledge and skills to repair, reconstruct and finish automobile bodies, fenders, and external features. Includes instruction in structure analysis, damage repair, non-structural analysis, mechanical and electrical components, plastics and adhesives, painting and refinishing techniques, and damage analysis and estimating.

**Credential**
Diploma

## Degree Maps

Collision Repair and Refinishing Technology Diploma
**Total Credits**
40

| Semester | Term | Term Credits |
|---|---|---|
| 1st Semester | Fall | 14 |

**Courses**
- AUB131 - Structural Damage I

**Term Credits** 4

**Courses**
- TRN110 - Introduction to Transport Technology

**Term Credits** 2

**Courses**
- TRN120 - Basic Transportation Electricity

**Term Credits** 5

**Courses**
- TRN180 - Basic Welding for Transportation

**Term Credits** 3

| Semester | Term | Term Credits |
|---|---|---|
| 2nd Semester | Spring | 16 |

**Courses**
- AUB111 - Painting & Refinishing I

**Term Credits** 4

**Courses**
- AUB112 - Painting & Refinishing II

**Term Credits** 4

**Courses**
- AUB121 - Non-Structural Damage I

**Term Credits** 3

**Courses**
- AUB162 - Autobody Estimating

**Term Credits** 2

**Courses**
- ENG102 - Applied Communications II

**Term Credits** 3

| Semester | Term | Term Credits |
|---|---|---|
| 3rd Semester | Summer | 10 |

**Courses**
- TRN140 - Transportation Climate Control

**Term Credits** 2

**Courses**
- TRN140A - Transportation Climate Control Lab

**Term Credits** 2

**Courses**
- AUB114 - Special Finishes

**Term Credits** 2

**Courses**
- PHY110 - Conceptual Physics

**Term Credits** 3

**Courses**
- PHY110A - Conceptual Physics Lab

**Term Credits** 1

# D60140 - Automotive Restoration Technology Diploma

## Overview

**Program Code**
D60140

**Program Description**
Pathway Description: Curriculums in the Mobile Equipment Maintenance and Repair pathway prepare 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. Course work may include transportation systems theory, braking systems, climate control, design parameters, drive trains, electrical/electronic systems, engine repair, engine performance, environmental regulations, materials, product finish, safety, steering/suspension, transmission/transaxles, and sustainable transportation, depending on the program major area chosen. Graduates of this pathway should be prepared to take professional licensure exams, which correspond to certain programs of study, and to enter careers as entry-level technicians in the transportation industry.

Automotive Restoration Technology: A program that prepares individuals to apply technical knowledge and skills to repair, reconstruct, finish and restore automobile bodies, fenders, and external features of a wide range of classic vehicles typically from year models 1900 - 1970. Includes instruction in internal combustion engines, transmissions, brakes, restoring original sheet metal, upholstery, and wood components, rebuilding starters, generators, and painting and refinishing techniques.

**Career Pathway Options**
Diploma in Automotive Restoration Technology

**Career Community**
Applied Technologies

**Program Length**
3 semesters

**Credential**
Diploma

## Program Outcomes

## Degree Maps

Automotive Restoration Technology Diploma
**Total Credits**
48

| Semester | Term | Term Credits |
|---|---|---|
| 1st Semester | Fall | 17 |

**Courses**
- ARS118 - Wood & Metal Restoration

**Term Credits** 3

**Courses**
- AUB131 - Structural Damage I

**Term Credits** 4

**Courses**
- TRN110 - Introduction to Transport Technology

**Term Credits** 2

**Courses**
- TRN120 - Basic Transportation Electricity

**Term Credits** 5

**Courses**
- TRN180 - Basic Welding for Transportation

**Term Credits** 3

| Semester | Term | Term Credits |
|---|---|---|
| 2nd Semester | Spring | 19 |

**Courses**
- ARS112 - Automotive Restoration Research

**Term Credits** 3

**Courses**
- ARS117 - Automotive Engines

**Term Credits** 2

**Courses**
- AUB111 - Painting & Refinishing I

**Term Credits** 4

**Courses**
- AUB112 - Painting & Refinishing II

**Term Credits** 4

**Courses**
- AUB121 - Non-Structural Damage I

**Term Credits** 3

**Courses**
- ENG102 - Applied Communications II

**Term Credits** 3

| Semester | Term | Term Credits |
|---|---|---|
| 3rd Semester | Summer | 12 |

**Courses**
- ARS113 - Automobile Upholstery

**Term Credits** 4

**Courses**
- ARS114 - Restoration Skills I

**Term Credits** 4

**Courses**
- PHY121 - Applied Physics I
  **OR**
- MAT110 - Mathematical Measurement and Literacy

**Term Credits** 4

# D60160 - Automotive Systems Technology Diploma

## Overview

**Program Code**
D60160

**Career Pathway Options**
Associate in Applied Science Degree in Automotive Systems Technology (Higher entrance standards required), Diploma in Automotive Systems Technology.

**Career Community**
Applied Technologies

**Program Length**
3 semesters

**Credential**
Diploma

## Program Outcomes

## Degree Maps

Automotive Systems Technology Diploma
**Total Credits**
42

| Semester | Term | Term Credits |
|---|---|---|
| 1st Semester | Fall | 16 |

**Courses**
- AUT151 - Brake Systems

**Term Credits** 3

**Courses**
- AUT151A (Generic)

**Term Credits** 1

**Courses**
- TRN110 - Introduction to Transport Technology

**Term Credits** 2

**Courses**
- TRN120 - Basic Transportation Electricity

**Term Credits** 5

**Courses**
- TRN170 - PC Skills for Transportation

**Term Credits** 2

**Courses**
- MAT110 - Mathematical Measurement and Literacy
  **OR**
- PHY110 - Conceptual Physics
  **OR**
- PHY110A (Generic)

**Term Credits** 3

| Semester | Term | Term Credits |
|---|---|---|
| 2nd Semester | Spring | 15 |

**Courses**
- AUT141 - Suspension & Steering Systems

**Term Credits** 3

**Courses**
- AUT141A - Suspension & Steering Lab

**Term Credits** 1

**Courses**
- AUT163 - Advanced Automotive Electricity

**Term Credits** 3

**Courses**
- AUT163A - Advanced Automotive Electricity Lab

**Term Credits** 1

**Courses**
- AUT181 - Engine Performance 1

**Term Credits** 3

**Courses**
- AUT181A - Engine Performance 1 Lab

**Term Credits** 1

**Courses**
- ENG102 - Applied Communications II

**Term Credits** 3

| Semester | Term | Term Credits |
|---|---|---|
| 3rd Semester | Summer | 11 |

**Courses**
- AUT114 - Safety and Emissions

**Term Credits** 2

**Courses**
- AUT114A - Safety and Emissions Lab

**Term Credits** 1

**Courses**
- AUT183 - Engine Performance 2

**Term Credits** 4

**Courses**
- TRN140 - Transportation Climate Control

**Term Credits** 2

**Courses**
- TRN140A - Transportation Climate Control Lab

**Term Credits** 2

# D60160EV - Automotive Systems Technology Electric Vehicle Diploma

## Overview

**Program Code**
D60160EV

**Program Description**
This curriculum prepare 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.

Course work may include transportation systems theory, braking systems, climate control, design parameters, drive trains, electrical/electronic systems, engine repair, engine performance, environmental regulations, materials, product finish, safety, steering/suspension, transmission/transaxles, and sustainable transportation, depending on the program major area chosen.

Graduates should be prepared to take professional licensure exams, which correspond to certain programs of study, and to enter careers as entry-level technicians in the transportation industry.

Automotive Systems Technology that prepares individuals to apply technical knowledge and skills to repair, service, and maintain all types of automobiles. The program includes instruction in brake systems, electrical systems, engine performance, engine repair, suspension and steering, automatic and manual transmissions and drive trains, and heating and air condition systems

**Career Community**
Applied Technologies

**Credential**
Diploma

## Degree Maps

Automotive Systems Technology, Electrical Vehicle Track, Diploma
**Total Credits**
36 - 37

| Semester | Term | Term Credits |
|---|---|---|
| 1st Semester | Fall | 14 - 15 |

**Courses**
- ATT115 - Green Transportation Safety and Service

**Term Credits** 2

**Courses**
- TRN110 - Introduction to Transport Technology

**Term Credits** 2

**Courses**
- TRN120 - Basic Transportation Electricity

**Term Credits** 5

**Courses**
- TRN170 - PC Skills for Transportation

**Term Credits** 2

**Courses**
- Math Requirement (Generic)

**Term Credits** 3 - 4

| Semester | Term | Term Credits |
|---|---|---|
| 2nd Semester | Spring | 14 |

**Courses**
- AUT141 - Suspension & Steering Systems

**Term Credits** 3

**Courses**
- AUT141A - Suspension & Steering Lab

**Term Credits** 1

**Courses**
- AUT163 - Advanced Automotive Electricity

**Term Credits** 3

**Courses**
- AUT163A - Advanced Automotive Electricity Lab

**Term Credits** 1

**Courses**
- TRN130 - Introduction to Sustainable Transportation

**Term Credits** 3

**Courses**
- English requirement (Generic)

**Term Credits** 3

| Semester | Term | Term Credits |
|---|---|---|
| 3rd Semester | Summer | 8 |

**Courses**
- ATT125 - Hybrid-Electric Transportation

**Term Credits** 4

**Courses**
- TRN140 - Transportation Climate Control

**Term Credits** 2

**Courses**
- TRN140A - Transportation Climate Control Lab

**Term Credits** 2

# D60260 - Motorcycle Mechanics Diploma

## Overview

**Program Code**
D60260

**Program Description**
Pathway Description: Curriculums in the Mobile Equipment Maintenance and Repair pathway prepare 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. Course work may include transportation systems theory, braking systems, climate control, design parameters, drive trains, electrical/electronic systems, engine repair, engine performance, environmental regulations, materials, product finish, safety, steering/suspension, transmission/transaxles, and sustainable transportation, depending on the program major area chosen. Graduates of this pathway should be prepared to take professional licensure exams, which correspond to certain programs of study, and to enter careers as entry-level technicians in the transportation industry.

Motorcycle Mechanics: A program that prepares individuals to apply technical knowledge and skills to repair, service, and maintain motorcycles and other similar powered vehicles. Includes instruction in lubrication and cooling systems, electrical and ignition systems, carburetion, fuel systems and adjustments of moving parts.

**Career Pathway Options**
Diploma in Motorcycle Mechanics

**Career Community**
Applied Technologies

**Program Length**
3 semesters

**Credential**
Diploma

## Program Outcomes

## Degree Maps

Motorcycle Mechanics Diploma
**Total Credits**
47

| Semester | Term | Term Credits |
|---|---|---|
| 1st Semester | Fall | 17 |

**Courses**
- CIS111 - Basic PC Literacy

**Term Credits** 2

**Courses**
- MCM111 - Motorcycle Mechanics

**Term Credits** 7

**Courses**
- MCM115 - Motorcycle Chassis

**Term Credits** 3

**Courses**
- TRN110 - Introduction to Transport Technology

**Term Credits** 2

**Courses**
- MAT110 - Mathematical Measurement and Literacy
  **OR**
- PHY110 - Conceptual Physics
- **AND** PHY110A - Conceptual Physics Lab

**Term Credits** 3

| Semester | Term | Term Credits |
|---|---|---|
| 2nd Semester | Spring | 19 |

**Courses**
- ENG102 - Applied Communications II

**Term Credits** 3

**Courses**
- MCM117 - Motorcycle Dynamometer Tuning I

**Term Credits** 3

**Courses**
- MCM122 - Motorcycle Engines

**Term Credits** 5

**Courses**
- MEC111 - Machine Processes I

**Term Credits** 3

**Courses**
- TRN120 - Basic Transportation Electricity

**Term Credits** 5

| Semester | Term | Term Credits |
|---|---|---|
| 3rd Semester | Summer | 11 |

**Courses**
- MCM114 - Motorcycle Fuel Systems

**Term Credits** 5

**Courses**
- MCM217 - Motorcycle Dynamometer Tuning II

**Term Credits** 3

**Courses**
- TRN180 - Basic Welding for Transportation

**Term Credits** 3

# All Courses

## ACA085 - Improving Study Skills

### Overview

**Course Description**
This course is designed to improve academic study skills and introduce resources that will complement developmental courses and engender success in college-level courses. Topics include basic study skills, memory techniques, note-taking strategies, test-taking techniques, library skills, personal improvement strategies, goal-setting, and learning resources. Upon completion, students should be able to apply techniques learned to improve performance in college-level classes.

### Credit Hours

1

**Course Typically Offered**
Fall, Spring, Summer

### Student Learning Outcomes

**Objectives**
Explain important campus policies, procedures, and regulations necessary to be a successful college student.

**Objectives**
Evaluate campus resources (e.g., tutoring, counseling, and other services) that will support success in college coursework.

**Objectives**
Compare and contrast the similarities and differences between secondary and post-secondary coursework.

**Objectives**
Develop SMART Goals, implement them, and reflect upon their effectiveness.

**Objectives**
Discuss the academic habits of mind and learning strategies necessary to be successful in college coursework.

## ACA090 - Student Success Strategies

### Overview

**Course Description**
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.

### Credit Hours

3

## ACA111 - College Student Success

### Overview

**Course Description**
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.

### Credit Hours

1

**Course Typically Offered**
Spring

### Student Learning Outcomes

**Objectives**
Evaluate campus resources (e.g., tutoring, counseling, and other services) that will support success in college coursework.

**Objectives**
Develop SMART Goals, implement them, and reflect upon their effectiveness.

**Objectives**
Apply time management and organizational strategies necessary to be successful in college coursework.

**Objectives**
Calculate Grade Point Averages based on the college's grading scale.

**Objectives**
Discuss the college advising process and create an academic plan in Self Service.

## ACA115 - Success & Study Skills

### Overview

**Course Description**
This course provides an orientation to the campus resources and academic skills necessary to achieve educational objectives. Emphasis is placed on an exploration of facilities and services, study skills, library skills, self-assessment, wellness, goal-setting, and critical thinking. Upon completion, students should be able to manage their learning experiences to successfully meet educational goals.

### Credit Hours

1

## ACA122 - College Transfer Success

### Overview

**Course Description**
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. This course has been approved for transfer under the CAA as a premajor and/or elective course requirement. This course has been approved for transfer under the ICAA as a premajor and/or elective course requirement.

### Credit Hours

1

**Course Typically Offered**
Fall, Spring, Summer

### Student Learning Outcomes

**Objectives**
Develop a strategic plan for completing community college academic goals, including certificates, diplomas, and/or associate degrees.

**Objectives**
Develop a strategic plan for transferring to a university and preparing for a new career.

**Objectives**
Identify the rights and responsibilities of transfer students under the Comprehensive Articulation Agreement (CAA), including Universal General Education Transfer Component (UGETC) designated courses, the Transfer Assured Admissions Policy (TAAP), and the CAA appeals process.

**Objectives**
Evaluate learning strategies, including note-taking, test-taking, information processing, time management, and memorization techniques, and identify strategies for improvement.

**Objectives**
Identify essential college resources, including financial aid, advising, registration, tutoring, library services, computer labs, and counseling services and recognize the importance of these resources on student success.

**Objectives**
Identify essential college policies and procedures, including academic integrity such as avoiding plagiarism; calculating a GPA, and maintaining satisfactory academic progress for financial aid eligibility and/or good academic standing. Develop a strategic plan for completing community college academic goals, including certificates, diplomas, and/or associate degrees.

# ACC115 - College Accounting

## Overview

**Course Description**
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.

## Credit Hours

4

**Course Typically Offered**
Summer

## Student Learning Outcomes

**Objectives**
Discuss the basic concepts of accounting.

**Objectives**
Analyze business transactions using the accounting equation and "T-accounts".

**Objectives**
Journalize and post transactions to accounts in the ledgers.

**Objectives**
List the steps of the accounting cycle and discuss the actions taken by the accountant during each step.

**Objectives**
Identify, describe, and prepare and interpret a trial balance, work sheet, income statement, statement of owner's equity, and balance sheet.

**Objectives**
Prepare and record adjusting and closing entries.

**Objectives**
Discuss the importance of internal controls.

**Objectives**
Discuss daily cash transactions, including receipts and disbursements.

**Objectives**
Manage banking transactions, including reconciling bank statements.

**Objectives**
Use an accounting software package to record accounting transactions.

**Objectives**
Prepare financial statements using an accounting software package.

# ACC120 - Principles of Financial Accounting

## Overview

**Course Description**
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 has been approved for transfer under the CAA/ICAA as a premajor and/or elective course requirement.

## Credit Hours

4

**Course Typically Offered**
Fall, Spring, Summer

## Student Learning Outcomes

**Objectives**
Discuss the basic concepts of accounting.

**Objectives**
Describe the differences among the sole proprietorship, partnership, and corporate forms of organization.

**Objectives**
List the steps of the accounting cycle and discuss the actions taken by the accountant during each step.

**Objectives**
Identify, describe, prepare and interpret the three basic financial statements.

**Objectives**
Prepare and record adjusting and closing entries.

**Objectives**
Describe the impact of accruals and deferrals on the financial statements.

**Objectives**
Demonstrate an understanding of the basics of financial reporting and analysis.

**Objectives**
Prepare specific accounting transactions and reports that relate to inventory, investments, bad debts, long-term debt, banking, fixed asset and merchandising functions.

**Objectives**
Identify the difference between the perpetual and periodic inventory systems.

**Objectives**
Apply inventory-costing methods: specific unit cost, weighted-average cost, FIFO, and LIFO, and identify the income effects and the tax effects of the inventory costing methods.

**Objectives**
Apply the lower-of-cost or market rule to inventory.

**Objectives**
Explain and demonstrate an understanding of internal control.

**Objectives**
Discuss and apply the methods and basis used to value accounts receivable.

**Objectives**
Demonstrate an understanding of notes receivables including the computations of the maturity date and interest and the entries to record the same.

**Objectives**
Discuss ethical issues relevant to course material.

# ACC121 - Principles of Managerial Accounting

## Overview

**Course Description**
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. This course has been approved for transfer under the CAA/ICAA as a premajor and/or elective course requirement.

## Credit Hours

4

**Course Typically Offered**
Fall, Spring

## Requisites

**Simple Requisites**

**State prerequisite**
**Type**
Prerequisite

Take ACC-120

Take ACC-120(S10290);

## Student Learning Outcomes

**Objectives**
To demonstrate understanding of various accounting concepts including material costs, labor costs, overhead costs, and how these costs flow through an accounting system.

**Objectives**
To identify the various types of costs including variable, fixed, and mixed costs.

**Objectives**
To distinguish between job-order, process, and activity-based costing systems.

**Objectives**
To prepare all necessary journal entries and reports relating to the costing system.

**Objectives**
To apply acquired knowledge in cost-volume-profit analysis, including computation of contribution margin, break-even points, margins of safety, and operating leverage.

**Objectives**
To prepare various types of budgets for manufacturing firms and understand how technology aids in development of such budgets.

**Objectives**
To prepare and use production reports, responsibility accounting reports, and differential analysis reports for decision-making.

**Objectives**
To determine the selling price of products using various approaches.

**Objectives**
To conduct performance evaluation using variances from standard costs and various nonfinancial measures.

**Objectives**
To analyze the effects of decentralized operations and the various methods of transfer pricing on accounting information.

**Objectives**
To use various methods to analyze capital investment opportunities.

# ACC122 - Principles of Financial Accounting II

## Overview

**Course Description**
This course provides additional instruction in the financial accounting concepts and procedures introduced in ACC 120. Emphasis is placed on the analysis of specific balance sheet accounts, with in-depth instruction of the accounting principles applied to these accounts. Upon completion, students should be able to analyze data, prepare journal entries, and prepare reports in compliance with generally accepted accounting principles.

## Credit Hours

3

**Course Typically Offered**
Fall, Spring, Summer

## Requisites

**Simple Requisites**

**State prerequisite**
**Type**
Prerequisite

Take ACC-120

Take ACC-120(S20278);

## Student Learning Outcomes

**Objectives**
Discuss and properly classify fixed asset expenditures.

**Objectives**
Compute and record depreciation of fixed assets for accounting purposes using multiple methods.

**Objectives**
Properly account for the disposal of fixed assets.

**Objectives**
Calculate and record depletion for natural resources.

**Objectives**
Compute and record amortization for intangibles.

**Objectives**
Discuss the corporate form of organization.

**Objectives**
Prepare accounting entries for various corporate transactions, including issuance of stock, declaration/ payment/distribution of dividends, purchase/resale of treasury stock, and income taxes.

**Objectives**
Describe the effect of stock splits.

**Objectives**
Prepare corporate financial statements, including retained earnings statement, statement of stockholders' equity, balance sheet, and income statement including earnings per share data.

**Objectives**
Prepare accounting entries for issuance, amortization, and redemption of, or for investments in bonds.

**Objectives**
Prepare a statement of cash flows.

**Objectives**
Discuss and apply financial statement analysis.

# ACC129 - Individual Income Taxes

## Overview

**Course Description**
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.

## Credit Hours

3

**Course Typically Offered**
Fall, Spring

## Student Learning Outcomes

**Objectives**
Demonstrate knowledge of the history and objectives of U.S. Tax Law.

**Objectives**
List the different entities subject to tax and reporting requirements.

**Objectives**
Apply the tax formula for individuals.

**Objectives**
Determine the proper forms and schedules needed to prepare an income tax return.

**Objectives**
Identify the optimum filing status for a taxpayer.

**Objectives**
Determine the number of personal and dependency exemptions for a taxpayer.

**Objectives**
Identify inclusions and exclusions from gross income.

**Objectives**
Compute common deductions for Adjusted Gross Income.

**Objectives**
Determine standard deduction amounts and compute itemized deductions.

**Objectives**
Compute tax on various levels of taxable income and determine tax owed or tax refund.

**Objectives**
Compute the most common individual tax credits.

**Objectives**
Describe the tax law development process and current tax law.

**Objectives**
Demonstrate application of research techniques to resolve tax problems.

**Objectives**
Complete an individual tax return.

# ACC130 - Business Income Taxes

## Overview

**Course Description**
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.

## Credit Hours

3

**Course Typically Offered**
Fall, Spring, Summer

## Student Learning Outcomes

**Objectives**
Explain how accounting methods and tax reporting periods are selected and which periods and/or methods are allowed under I.R.S. regulations.

**Objectives**
Compute various business tax deductions including depreciation on business assets for tax purposes under the various applicable guidelines.

**Objectives**
Determine appropriate tax treatment for disposition of business assets.

**Objectives**
Discuss business responsibilities for estimated tax payments, payroll tax withholding, depositing, and related reporting.

**Objectives**
Determine tax consequences at both entity and owner/shareholder levels.

**Objectives**
Complete the proper forms and schedules needed to prepare employment tax returns and income tax returns for a partnership, 7. C-Corporation, and an S-Corporation.

**Objectives**
Compare and contrast the tax aspects of different forms of business organizations including proprietorships, partnerships, limited liability companies, and C and S corporations.

**Objectives**
Explain applicable penalties, statute of limitations, and interest computations.

**Objectives**
Apply research techniques to resolve tax problems.

**Objectives**
Explain the current structure of the I.R.S.

**Objectives**
Explain the common tax audit process, the appeals process, and litigation

**Objectives**
Demonstrate understanding of tax planning opportunities.

# ACC140 - Payroll Accounting

## Overview

**Course Description**
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.

## Credit Hours

2

**Course Typically Offered**
Fall, Spring

## Requisites

**Simple Requisites**

**State prerequisite**
**Type**
Prerequisite

Take One: ACC-115 or ACC-120

Take ACC-115(S12924) or ACC-120(S10290);

## Student Learning Outcomes

**Objectives**
Identify the various laws that affect employers in their payroll operations.

**Objectives**
Calculate pay rates.

**Objectives**
Calculate Federal and State taxes.

**Objectives**
Complete payroll related tax forms.

**Objectives**
Properly record all payroll related transactions and complete payroll journal entries.

# ACC149 - Introduction to Accounting Spreadsheets

## Overview

**Course Description**
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.

## Credit Hours

2

**Course Typically Offered**
Fall, Spring

## Requisites

**Simple Requisites**

**State prerequisite**
**Type**
Prerequisite

Take One: ACC-115 or ACC-120

Take ACC-115(S12924) or ACC-120(S10290);

## Student Learning Outcomes

**Objectives**
Discuss the basic applications of Excel for accounting

**Objectives**
Apply industry standard formatting rules to spreadsheets

**Objectives**
Apply a pivot table to a set of large data

**Objectives**
Enter data into spreadsheets

**Objectives**
Apply absolute cell referencing

**Objectives**
Create charts and graphs that are directly linked to data

**Objectives**
Calculate various methods of depreciation using Excel functions

**Objectives**
Create depreciation schedules

**Objectives**
Calculate loan and bond payments

**Objectives**
Create loan and bond amortization tables

**Objectives**
Create an operating, investing, and finance budget

**Objectives**
Calculate present and future values using Excel functions

**Objectives**
Discuss applications of present and future value calculations

# ACC150 - Accounting Software Applications

## Overview

**Course Description**
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.

## Credit Hours

2

**Course Typically Offered**
Fall, Spring

## Requisites

**Simple Requisites**

**State prerequisite**
**Type**
Prerequisite

Take One: ACC-115 or ACC-120

Take ACC-115(S12924) or ACC-120(S10290);

## Student Learning Outcomes

**Objectives**
Demonstrate backing up and restoring company data using QuickBooks

**Objectives**
Enter vendor, customer, employee transactions

**Objectives**
Set up inventory items

**Objectives**
Process payroll

**Objectives**
Record sales transactions

**Objectives**
Print financial statements

**Objectives**
Close the fiscal year

# ACC220 - Intermediate Accounting I

## Overview

**Course Description**
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.

## Credit Hours

4

**Course Typically Offered**
Fall, Summer

## Requisites

**Simple Requisites**

**Prerequisite**
**Type**
Prerequisite

Take ACC 122

Take ACC-122;

**State prerequisite**
**Type**
Prerequisite

Take ACC-120

Take ACC-120(S20278);

## Student Learning Outcomes

**Objectives**
Define generally accepted accounting principles, and describe their development.

**Objectives**
Explain the “conceptual framework”, its purpose, and applications.

**Objectives**
Describe the basic assumptions and principles underlying financial accounting.

**Objectives**
Prepare a classified balance sheet, and disclosures.

**Objectives**
Demonstrate a general understanding of the audit report.

**Objectives**
Classify items properly in the balance sheet.

**Objectives**
Compute and interpret the common ratios used by financial analysts.

**Objectives**
Prepare a multiple-step income statement and earnings per share disclosures.

**Objectives**
Explain the importance of earnings quality for users of financial statements.

**Objectives**
Prepare a proper statement of cash flows.

**Objectives**
Demonstrate understanding of revenue recognition concepts.

**Objectives**
Compute inventory values and cost of goods sold under various cost flow assumptions.

**Objectives**
Apply the lower of cost or market rule in valuation of inventory.

**Objectives**
Value transactions appropriately involving long-lived tangible and intangible assets.

**Objectives**
Record research and development costs appropriately.

# ACC221 - Intermediate Accounting II

## Overview

**Course Description**
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.

## Credit Hours

4

**Course Typically Offered**
Fall, Spring, Summer

## Requisites

**Simple Requisites**

**State prerequisite**
**Type**
Prerequisite

Take ACC-220

Take ACC-220(S10646);

## Student Learning Outcomes

**Objectives**
Describe characteristics and costs included in property, plant, and equipment

**Objectives**
Apply depreciation methods accurately to financial reports.

**Objectives**
Explain the accounting issues related to asset impairment.

**Objectives**
Compute depletion expense for natural resources.

**Objectives**
Identify and explain the accounting for intangible assets.

**Objectives**
Describe accounting issues related to research and development costs.

**Objectives**
Explain the accounting treatment for intangible assets with finite and/or indefinite lives.

**Objectives**
Identify the three categories of debt and/or equity securities.

**Objectives**
Describe the accounting and reporting treatment for debt and equity securities.

**Objectives**
Explain and compare the equity and fair value methods of accounting for investments.

**Objectives**
Describe the procedures associated with issuing long-term debt.

**Objectives**
Identify various types of bond issues, including discount or premium amortization.

**Objectives**
Describe the accounting for the extinguishment of debt.

**Objectives**
Explain the accounting of long-term notes payable

**Objectives**
Discuss the characteristics of the corporate form of organization.

**Objectives**
Explain the accounting procedures for issuing shares of stock.

**Objectives**
Describe the accounting for treasury stock

**Objectives**
Explain the accounting for and reporting of preferred stock

**Objectives**
Identify and account for the various forms of dividends

**Objectives**
Describe the accounting issues for revenue recognition.

**Objectives**
Apply the percentage-of-completion method for long-term contracts.

**Objectives**
Apply the completed-contract method for long-term contracts

**Objectives**
Identify the proper accounting for losses on long-term contracts.

**Objectives**
Identify permanent and temporary differences between financial and taxable income.

**Objectives**
Explain the purpose of the deferred tax asset valuation allowance.

**Objectives**
Account for loss carryback and loss carry forward applications.

**Objectives**
Describe the need for deferred tax assets or deferred tax liabilities.

**Objectives**
Prepare a cash flow statement using the direct and indirect methods of calculating cash flows from operating activities.

**Objectives**
Identify sources of information for a statement of cash flows

**Objectives**
Discuss special problems in preparing a statement of cash flows

# ACC227 - Practices in Accounting

## Overview

**Course Description**
This course provides an advanced in-depth study of selected topics in accounting using case studies and individual and group problem solving. Topics include cash flow, financial statement analysis, individual and group problem solving, practical approaches to dealing with clients, ethics, and critical thinking. Upon completion, students should be able to demonstrate competent analytical skills and effective communication of their analysis in written and/or oral presentations.

## Credit Hours

3

**Course Typically Offered**
Fall, Spring

## Requisites

**Simple Requisites**

**State prerequisite**
**Type**
Prerequisite

Take ACC-220

Take ACC-220(S10646);

### Student Learning Outcomes

**Objectives**
Demonstrate competent analytical skills in reviewing Financial Statements of Public Companies.

**Objectives**
Prepare Financial Statements.

**Objectives**
Complete an individual tax return from Financial Statements.

**Objectives**
Identify and research relevant tax court cases.

**Objectives**
Identify how ethics and accounting are connected and the impact on the profession.

**Objectives**
Describe the Audit process, best practices, and current issues.

**Objectives**
Identify internal controls and fraud.

**Objectives**
Manage client expectations in the professional environment.

**Objectives**
Use resources provided by NC CPA Board and AICPA.

## AGR110 - Agricultural Economics

### Overview

**Course Description**
This course provides an introduction to basic economic principles in agriculture. Topics include supply and demand, the role of agriculture in the economy, economic systems, and micro- and macroeconomics. Upon completion, students should be able to explain economic systems, interpret supply and demand curves, and complete cost and revenue production schedules.

### Credit Hours

3

**Course Typically Offered**
Fall

## AGR111 - Basic Farm Maintenance

### Overview

**Course Description**
This course covers fundamentals of maintenance and repair of farm facilities and equipment. Topics include safe use of hand tools and farm machinery, carpentry, concrete, painting, wiring, welding, plumbing, and calculating costs and materials needed. Upon completion, students should be able to answer theoretical questions on topics covered and assist with maintenance and repair of farm facilities and equipment.

### Credit Hours

2

**Course Typically Offered**
Fall, Spring, Summer

### Student Learning Outcomes

**Objectives**
Demonstrate proper use and maintenance of tools and equipment used on the farm.

**Objectives**
Select proper tools and equipment needed for various farm maintenance needs.

**Objectives**
Create cost projections and material lists for farm projects.

**Objectives**
Research options for appropriate farm facility needs.

**Objectives**
Demonstrate safe use of tools and equipment found in agricultural settings.

## AGR121 - Biological Pest Management

### Overview

**Course Description**
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.

### Credit Hours
3

**Course Typically Offered**
Spring

### Student Learning Outcomes

**Objectives**
Identify soil properties and discuss how they relate to pest management.

**Objectives**
Identify major pests and diseases in production agriculture.

**Objectives**
Create a pest management plan using sustainable practices.. Identify soil properties and discuss how they relate to pest management.

## AGR139 - Introduction to Sustainable Agriculture

### Overview

**Course Description**
This course will provide students with a clear perspective on the principles, history and practices of sustainable agriculture in our local and global communities. Students will be introduced to the economic, environmental and social impacts of agriculture. Upon completion, students will be able to identify the principles of sustainable agriculture as they relate to basic production practices.

### Credit Hours
3

**Course Typically Offered**
Fall, Spring, Summer

### Student Learning Outcomes

**Objectives**
Compare the characteristics of sustainable agriculture systems to those of conventional agriculture systems.

**Objectives**
Describe the role and responsibility of the consumer in creating a sustainable food system.

**Objectives**
Classify organic, biodynamic, and other specific bio-intensive production methods as sub-sets of sustainable agriculture.

**Objectives**
Discuss the essentials of a sustainable agriculture system, including its role in the environment, the economy and in preserving viable rural communities.

## AGR160 - Plant Science

### Overview

**Course Description**
This course introduces the basic principles of botany that pertain to agricultural production. Emphasis is placed on the anatomy and physiology of flowering plants. Upon completion, students should be able to identify and explain plant systems.

### Credit Hours
3

**Course Typically Offered**
Spring

### Student Learning Outcomes

**Objectives**
Design an on-farm research project including a final written report

## AGR170 - Soil Science

### Overview

**Course Description**
This course covers the basic principles of soil management and fertilization. Topics include liming, fertilization, soil management, biological properties of soil (including beneficial microorganisms), sustainable land care practices and the impact on soils, and plant nutrients. Upon completion, students should be able to analyze, evaluate, and properly amend soils/media according to sustainable practices.

### Credit Hours
3

**Course Typically Offered**
Fall

## Student Learning Outcomes

**Objectives**
Identify the primary factors which influence soil formation.

**Objectives**
Evaluate soil for agricultural use, including the ability to locate and interpret a soil report and soil survey.

**Objectives**
Explain the influence of soil physical and chemical properties on soil fertility and water management practices.

**Objectives**
Explain the role of soil microbes on soil nutrient cycles and fertility.

**Objectives**
Perform accurate sampling for soil fertility tests and interpret test results.

**Objectives**
Explain the importance of organic matter in crop production.

**Objectives**
Explain the importance of soil pH and the value of lime in crop production.

**Objectives**
Determine ways to supply soil nitrogen and other soil nutrients at appropriate levels.

**Objectives**
Create a land use plan when presented with a soil test report and other information (soil surveys, visual inspection).

# AGR212 - Farm Business Management

## Overview

**Course Description**
This course introduces budgeting, farm analysis, production costs, business organizations, and general management principles. Topics include enterprise budgets, partial budgets, whole farm budgets, income analysis, and business organizations. Upon completion, students should be able to prepare and analyze a farm budget.

## Credit Hours

3

**Course Typically Offered**
Fall, Spring

## Student Learning Outcomes

**Objectives**
Create a personal goal statement

**Objectives**
Identify profit centers

**Objectives**
Create enterprise budgets by crop

**Objectives**
Develop marketing strategies

**Objectives**
Utilize effective management strategies

**Objectives**
Explain different retirement strategies

**Objectives**
Write your own business plan

# AGR214 - Agricultural Marketing

## Overview

**Course Description**
This course covers basic marketing principles for agricultural products. Topics include buying, selling, processing, standardizing, grading, storing, and marketing of agricultural commodities. Upon completion, students should be able to construct a marketing plan for an agricultural product.

## Credit Hours

3

**Course Typically Offered**
Fall, Spring

### Student Learning Outcomes

**Objectives**
Construct a marketing plan for an agricultural product or business

**Objectives**
Conduct a marketing skills and preferences assessment

**Objectives**
Identify appropriate markets based on farmer skill level and personality

**Objectives**
Identify appropriate markets based on demographic research

**Objectives**
Demonstrate the ability to identify and correct food safety concerns in harvest and post-harvest handling

**Objectives**
Apply the principles of retail display to create a market stand that is visually appealing and functional

**Objectives**
Create a farm website/facebook page (and associated social media) that is appropriate for marketing agricultural products

## AGR220 - Agricultural Mechanization

### Overview

**Course Description**
This course is a study of farm machinery and agricultural equipment. Topics include selection and operation of tractors, materials handling equipment, tillage and harvesting equipment, and irrigation systems. Upon completion, students should be able to identify equipment parts and explain the basic principles of machinery operation and management.

### Credit Hours

3

**Course Typically Offered**
Fall

### Student Learning Outcomes

**Objectives**
Develop maintenance schedule for equipment used on the farm.

**Objectives**
Evaluate the need for specific pieces of agricultural equipment.

**Objectives**
Perform basic diagnostic assessments for small and large farm equipment.

**Objectives**
Evaluate opportunities for on farm energy production.

**Objectives**
Demonstrate safe use of tools and equipment found in agricultural settings.

## AGR221 - Farm Structures

### Overview

**Course Description**
This course covers basic agricultural buildings and structures. Topics include building materials, cost estimating, basic blueprint reading, and job planning. Upon completion, students should be able to complete a cost estimate for constructing an agricultural structure.

### Credit Hours

3

## AGR265 - Organic Crop Production: Spring

### Overview

**Course Description**
This course includes a study of spring organic crop production practices, including vegetables, cut flowers, and culinary and medicinal herbs. Topics include variety selection, production methods, and record keeping procedures for certification. Upon completion, students will be able to demonstrate a knowledge of organic crop production appropriate for the spring season.

### Credit Hours

3

**Course Typically Offered**
Spring

## Student Learning Outcomes

**Objectives**
Locating resources for certified organic producers.

**Objectives**
Provide concise, written reports with documentation about the latest news related to organic crop production.

**Objectives**
Recognizing which crops are suitable for organic production in the Southeast.

**Objectives**
Planning, ordering and scheduling for year-round crop production

**Objectives**
Analyzing different production strategies for appropriateness.

**Objectives**
Evaluating a site for suitability of cultivation

**Objectives**
Applying critical and creative thinking skills in farm management issues.

**Objectives**
Selecting and using the appropriate hand tools and equipment for a variety of production and management tasks.

**Objectives**
Post- harvest handling of all crops discussed.

# AGR266 - Organic Crop Production: Fall

## Overview

**Course Description**
This course includes a study of fall organic crop production practices, including vegetables, cut flowers, and culinary and medicinal herbs. Topics include variety selection, production methods, and record keeping procedures for certification. Upon completion, students should be able to demonstrate a knowledge of organic crop production appropriate for the fall season.

## Credit Hours
3

**Course Typically Offered**
Fall

## Student Learning Outcomes

**Objectives**
Locating resources for certified organic producers.

**Objectives**
Recognizing which crops are suitable for organic production in the Southeast.

**Objectives**
Planning, ordering and scheduling for year-round crop production

**Objectives**
Analyzing different production strategies for appropriateness.

**Objectives**
Evaluating a site for suitability of cultivation

**Objectives**
Applying critical and creative thinking skills in farm management issues.

**Objectives**
Selecting and using the appropriate hand tools and equipment for a variety of production and management tasks.

**Objectives**
Post- harvest handling of all crops discussed.

# AGR267 - Permaculture

## Overview

**Course Description**
This course introduces the design of sustainable human habitats as part of a sustainable system, with emphasis placed on living systems of the temperate region. Topics include fundamentals of permaculture system design for farms, including gardens, fields, water, animals, buildings, economics, and society. Upon completion, students should be able to design a functional holistic farm system.

### Credit Hours
3

**Course Typically Offered**
Fall

### Student Learning Outcomes

**Objectives**
Differentiate permaculture design from traditional design for working landscapes.

**Objectives**
Analyze a site map to identify critical features prior to creating a farm design.

**Objectives**
Create a farm design using Permaculture guidelines.

**Objectives**
Design plant guilds for temperate climates by applying integrated forest gardening techniques.

**Objectives**
Evaluate appropriate permaculture solutions to real world problems.

**Objectives**
Construct useful structures using natural building techniques.

**Objectives**
Identify useful and appropriate plants for permaculture use.

## AGR268 - Advanced Organic Crop Production

### Overview

**Course Description**
This course provides students with structured practical experience in managing the complexities of organic crop production. Emphasis is placed on crop management skills and decision making associated with production-related operations such as cover crop management, irrigation, and post-harvest physiology. Upon completion, students should be able to create and implement a crop management plan and demonstrate competency in the selection and efficient use of equipment.

### Credit Hours
4

**Course Typically Offered**
Spring

### Requisites

**Simple Requisites**

**State prerequisite**
**Type**
Prerequisite

Take One: AGR-265 or AGR-266

Take AGR-265 or AGR-266;

### Student Learning Outcomes

**Objectives**
Long-term decision making for farm sustainability: cover crop selection and timing, crop rotations, implement/ equipment use and selection, enterprise selection, etc.

**Objectives**
Good Agricultural Practices (GAP) assessment for on-farm production practices: evaluating the farm, wash station, pack shed, and post-harvest marketing equipment/vehicles and associated human contact with livestock and produce, write an improvement plan for current practices

**Objectives**
Selecting and applying optimal strategies for organic farm management: including soil management (nutrient budgets, soil OM, available nutrients) and record-keeping strategies that correlate with pest management and crop production strategies.

**Objectives**
Recognizing crop problems and implementing appropriate action steps for correction.

**Objectives**
Demonstrate appropriate choices for timing (plant and transplant, manage and harvesting of crops and cover crops), tool selection, pest management

**Objectives**
Strategies for optimal labor management (self and others)

**Objectives**
Livestock management (GAP, Organic, and best practices for health of livestock)

**Objectives**
Implementing appropriate quality control of product based on market needs: demonstrating an understanding of quality, grades of produce, post-harvest management, selecting for CSA, market stand and culinary

## AGR3001B1 - Biological Pest Management

### Overview

**Course Description**
This course emphasizes the building and maintenance of healthy soil, plant, and insect biological cycles as the key to pest and disease management. Content includes the study of major crop pests and diseases such as 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, weeds, and diseases. Completed in a curriculum environment, this is a parallel course offered with AGR121.

### Credit Hours

| | **Credit Hours Max:** |
|---|---|
| 0 | 0 |

## AHR110 - Introduction to Refrigeration

### Overview

**Course Description**
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.

### Credit Hours

5

**Course Typically Offered**
Fall

### Student Learning Outcomes

**Objectives**
Demonstrate safe practices and procedures with tools, materials, and industry accepted test equipment covered in the course.

**Objectives**
Identify and explain the theory, operating principle, and components of the refrigeration cycle.

**Objectives**
Identify tools, materials, and equipment used in the refrigeration industry.

**Objectives**
Evacuate, charge, recover, and safely operate a basic refrigeration /cooling system in accordance with EPA regulations.

**Objectives**
Demonstrate refrigeration piping and soldering techniques.

## AHR111 - HVACR Electricity

### Overview

**Course Description**
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.

### Credit Hours

3

**Course Typically Offered**
Fall

## Student Learning Outcomes

**Objectives**
Demonstrate safe practices and procedures with tools, materials, and industry accepted test equipment covered in the course.

**Objectives**
Be able to use electrical test instruments.

**Objectives**
Demonstrate knowledge of electricity as applied to heating, ventilation, air conditioning and refrigeration machines.

**Objectives**
Identify the various electrical components used in HVAC equipment and explain their operation.

**Objectives**
Use Ohm's Law to calculate the current, voltage, and resistance in a circuit.

**Objectives**
Draw and interpret wiring schematics for installation and troubleshooting.

**Objectives**
Follow systematic troubleshooting procedure to diagnose electrical problems and control circuit problems.

# AHR112 - Heating Technology

## Overview

**Course Description**
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.

## Credit Hours

4

**Course Typically Offered**
Spring

## Student Learning Outcomes

**Objectives**
Demonstrate safe practices and procedures with tools, materials, and industry accepted test equipment covered in the course.

**Objectives**
Use industry terminology to describe principles for oil, gas, and electric warm air heating systems.

**Objectives**
Identify the major components of oil, gas, and electric heating systems.

**Objectives**
Install and start-up warm air heating systems.

**Objectives**
Identify various types of energy sources used in heating and describe the individual characteristics of each.

**Objectives**
Describe service procedures for heating systems.

**Objectives**
Use tools and instruments necessary to troubleshoot and test system efficiency.

# AHR113 - Comfort Cooling

## Overview

**Course Description**
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.

## Credit Hours

4

**Course Typically Offered**
Spring

## Student Learning Outcomes

**Objectives**
Demonstrate safe practices and procedures with tools, materials, and industry accepted test equipment covered in the course.

**Objectives**
Evaluate system operation using psychometrics, manufacturer specifications, and test instruments.

**Objectives**
Demonstrate methods of installing, testing, maintaining, and repairing comfort cooling systems.

**Objectives**
Demonstrate use of test equipment and interpretation of test equipment results.

**Objectives**
Identify refrigerants used in residential and light commercial comfort cooling systems and demonstrate the proper procedures for handling these refrigerants

# AHR114 - Heat Pump Technology

## Overview

**Course Description**
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.

## Credit Hours

4

**Course Typically Offered**
Spring

## Requisites

**Simple Requisites**

**State prerequisite**
**Type**
Prerequisite

Take One: AHR-110 or AHR-113

Take AHR-110(S23419) or AHR-113(S23422);

## Student Learning Outcomes

**Objectives**
Demonstrate safe practices and procedures with tools, materials, and industry accepted test equipment covered in the course.

**Objectives**
Diagram refrigerant flow through a heat pump in both the heating and cooling mode identifying refrigerant conditions and pressures.

**Objectives**
Explain the defrost cycle for air-to-air heat pumps.

**Objectives**
Identify and troubleshoot electrical control system components for heat pumps.

**Objectives**
Identify and troubleshoot refrigeration system components for heat pumps.

**Objectives**
Identify and describe the different types of heat pumps in relation to their source of heat.

# AHR115 - Refrigeration Systems

## Overview

**Course Description**
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.

## Credit Hours

2

**Course Typically Offered**
Summer

## Requisites

**Simple Requisites**

**State prerequisite**
**Type**
Prerequisite

Take AHR-110

Take AHR-110(S23419);

## Student Learning Outcomes

**Objectives**
Identify various refrigerator systems.

**Objectives**
Understand how the defrost cycle works.

**Objectives**
Explain the difference in metering refrigerator equipment.

# AHR120 - HVACR Maintenance

## Overview

**Course Description**
This course introduces the basic principles of industrial air conditioning and heating systems. Emphasis is placed on preventive maintenance procedures for heating and cooling equipment and related components. Upon completion, students should be able to perform routine preventive maintenance tasks, maintain records, and assist in routine equipment repairs.

## Credit Hours

2

**Course Typically Offered**
Summer

## Student Learning Outcomes

**Objectives**
Perform basic maintenance procedures on air conditioning and refrigeration equipment. Heating if time permits.

**Objectives**
Troubleshoot simple problems on air conditioning, heating and refrigeration equipment.

**Objectives**
Define the theories relating to heating and air conditioning systems and identify various system components and their function.

**Objectives**
Apply safe work practices relating to heating and air conditioning service techniques.

**Objectives**
Diagram a basic HVAC system including all components.

**Objectives**
Identify common refrigerants.

**Objectives**
Correctly demonstrate the process to evacuate and recharge an air conditioning or refrigeration system.

**Objectives**
Understand electrical test and properties related to the HVAC equipment and related power schematics.

**Objectives**
Become proficient with a voltmeter (VOM) as related to the projects given in class.

# AHR125 - HVACR Electronics

## Overview

**Course Description**
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.

## Credit Hours

3

**Course Typically Offered**
Fall

## Requisites

**Simple Requisites**

**State prerequisite**
**Type**
Prerequisite

Take One: AHR-111, ELC-111, or ELC-112

Take AHR-111(S23420) ELC-111 or ELC-112(S21587);

## Student Learning Outcomes

**Objectives**
Identify and know the basic operations of various electrical components used in HVACR systems

**Objectives**
Read and understand the use of Electrical schematics used in HVACR systems for system troubleshooting.

**Objectives**
Understand the Defrost systems for Residential HVAC systems.

**Objectives**
Use the VOM and ammeter to verify proper operations and use for troubleshooting systems problems.

# AHR133 - HVAC Servicing

## Overview

**Course Description**
The course covers the maintenance and servicing of HVAC equipment. Topics include testing, adjusting, maintaining, and troubleshooting HVAC equipment and record keeping. Upon completion, students should be able to adjust, maintain, and service HVAC equipment.

## Credit Hours

4

**Course Typically Offered**
Fall

## Requisites

**Simple Requisites**

**Recommended concurrent or previous courses**
**Type**
Corequisite

Take AHR-112 and AHR-113

Take AHR-112(S14102) AHR-113(S14131);

**State concurrent or previous courses**
**Type**
Corequisite

Take One: AHR-112 OR AHR-113

Take AHR-112(S23421) or AHR-113(S23422);

## Student Learning Outcomes

**Objectives**
Remove and replace various residential systems components such as Compressors, blower motors, various circuit boards and check for proper operation.

**Objectives**
Understand the process used for detecting a leak in a system and methods of leak repair where possible.

**Objectives**
Practice proper refrigerant evacuation and charging procedures.

**Objectives**
Practice brazing techniques as needed for HVAC component replacement procedures.

**Objectives**
Learn various methods of diagnosis of HVAC unit problems.

# AHR151 - HVAC Duct Systems I

## Overview

**Course Description**
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.

## Credit Hours

2

**Course Typically Offered**
Fall

### Student Learning Outcomes

**Objectives**
Understand Static pressure and its use in duct systems.

## AHR160 - Refrigerant Certification

### Overview

**Course Description**
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.

### Credit Hours

1

**Course Typically Offered**
Summer

### Student Learning Outcomes

**Objectives**
Student will be given the opportunity to take the EPA608 Refrigerant Certification test.

**Objectives**
TSW will take the EPA Certification Examination.

## AHR180 - HVACR Customer Relations

### Overview

**Course Description**
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.

### Credit Hours

1

**Course Typically Offered**
Spring

### Student Learning Outcomes

**Objectives**
To define customer service.

**Objectives**
To recognize and explain elements of service culture

**Objectives**
To recognize customer-friendly systems.

**Objectives**
To ensure positive customer interactions.

**Objectives**
To recognize the impact of verbal and nonverbal communication on customers.

**Objectives**
To create customer relationships.

**Objectives**
To identify and develop strategies to prevent customer dissatisfaction

## AHR211 - Residential System Design

### Overview

**Course Description**
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.

### Credit Hours

3

**Course Typically Offered**
Summer

### Student Learning Outcomes

**Objectives**
Design and draw a duct system in accordance with the ACCA Manual D.

**Objectives**
Apply appropriate HVACR codes to the design of residential HVACR systems.

**Objectives**
Calculate heating and cooling loads for residential structures in accordance with ACCA Manual J.

## AHR212 - Advanced Comfort Systems

### Overview

**Course Description**
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.

### Credit Hours

4

**Course Typically Offered**
Summer

### Requisites

**Simple Requisites**

**State prerequisite**
**Type**
Prerequisite

Take AHR-114

Take AHR-114(S14084);

### Student Learning Outcomes

**Objectives**
Demonstrate safe practices and procedures with tools, materials, and industry accepted test equipment covered in the course.

**Objectives**
Identify components of water-cooled comfort systems, water-source/ geothermal heat pumps, and high efficiency heat pumps.

**Objectives**
Compare and contrast standard and high efficiency heat pumps.

**Objectives**
Design and size earth coupled piping loops for geothermal heat pump systems.

**Objectives**
Describe geothermal heat pump operation.

**Objectives**
Test duct systems for proper airflow and make adjustments.

## AHR213 - HVACR Building Code

### Overview

**Course Description**
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.

### Credit Hours

2

**Course Typically Offered**
Spring

### Student Learning Outcomes

**Objectives**
Apply the mechanical, gas, and energy code of North Carolina for designing, installing, maintaining and servicing HVACR systems.

**Objectives**
Define terms and abbreviations using codes applicable to the HVACR trade.

**Objectives**
Analyze information to conform to North Carolina mechanical, gas, and energy code.

**Objectives**
Describe sources of authority and methods of enforcement.

# AHR215 - Commercial HVAC Controls

## Overview

**Course Description**
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.

## Credit Hours

2

**Course Typically Offered**
Spring

## Requisites

**Simple Requisites**

**State prerequisite**
**Type**
Prerequisite

Take One: AHR-111, ELC-111, or ELC 112

Take AHR-111(S23420) ELC-111 or ELC-112(S23481);

## Student Learning Outcomes

**Objectives**
Understand how Building Automation Systems controll HVAC equipment

**Objectives**
Learn the difference between pneumatic controls and low voltage control.

**Objectives**
Learn how zone control work to cool/ heat different areas with one system.

# AHR225 - Commercial System Design

## Overview

**Course Description**
This course covers the principles of designing heating and cooling systems for commercial buildings. Emphasis is placed on commercial heat loss/gain calculations, applied psychometrics, 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.

## Credit Hours

3

**Course Typically Offered**
Spring

## Student Learning Outcomes

**Objectives**
Understand refrigeration cycle conditions using enthalpy.

**Objectives**
Plot refrigeration cycle.

**Objectives**
How to pump down chillers and residential units.

**Objectives**
Compressor identification.

**Objectives**
Compressor operator temperature.

# ALT110 - Biofuels I

## Overview

**Course Description**
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.

## Credit Hours

3

**Course Typically Offered**
Summer

## Student Learning Outcomes

**Objectives**
Demonstrate knowledge of the history, current state, and future potential of bioenergy in the United States and around the world.

**Objectives**
Identify the various sources of bioenergy and their applications.

**Objectives**
Identify materials needed for the production of bioenergy in a laboratory setting.

**Objectives**
Determine the proper amount of materials to produce a successful chemical reaction for the production of bioenergy.

**Objectives**
Recognize the different characteristics of feedstocks used for the production of bioenergy.

**Objectives**
Demonstrate good lab protocols including personal safety, proper materials handling, and documentation in a clear and logical manner.

**Objectives**
Identify basic quality testing procedures for biofuels and the importance of quality fuel production.

**Objectives**
Demonstrate understanding of the economics of bioenergy production.

## ALT120 - Renewable Energy Technologies

### Overview

**Course Description**
This course provides an introduction to multiple technologies that allow for the production and conservation of energy from renewable sources. Topics include hydo-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.

### Credit Hours

3

**Course Typically Offered**
Fall

### Student Learning Outcomes

**Objectives**
Understand the differences between renewable and nonrenewable energy sources

**Objectives**
Compare and contrast various sources of renewable energy

**Objectives**
Evaluate possibilities for various renewable energy sources in different geographic locations

**Objectives**
Locate resources used to make informed decisions about various renewable energies

**Objectives**
Identify mechanical components of renewable energy systems

**Objectives**
Describe the flow of electrons from power source to end user

**Objectives**
Implement changes to their own lives to promote energy efficiency and renewable energies

## ALT250 - Thermal Systems

### Overview

**Course Description**
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.

### Credit Hours

3

**Course Typically Offered**
Spring

### Student Learning Outcomes

**Objectives**
Describe and explain the properties and equipment used in thermal solar energy and geothermal systems.

**Objectives**
Assemble components to install a solar heating system.

**Objectives**
Apply critical thinking methodology to solar and geothermal sizing, speciifying, and troubleshooting.

**Objectives**
Be fluent in a vocabulary of technical terms related to the systems.

**Objectives**
Recognize the differences and applications of different types of systems.

**Objectives**
Perform site assessment for solar installation.

**Objectives**
Describe the economic factors relevant to implementing sustainable systems.

**Objectives**
Relate information from this classs to the NABCEP Objectives and Task Analysis for Solar Water and Pool Heating Systems.

## AMC200 - Health Information for Coders

### Overview

**Course Description**
This course provides a detailed look at the role of a coder within the healthcare system. Topics include health record content and documentation for all record types, roles and responsibilities of various providers and disciplines, data source reliability and accuracy, policies and procedures to ensure compliance with regulations and standards, and legal and regulatory requirements. Upon completion, students should be able to demonstrate an understanding of the role of coding in the healthcare organization and apply various policies and procedures as they relate to documentation and compliance and comply with regulatory standards.

### Credit Hours

2

## AMC201 - Legal and Compliance

### Overview

**Course Description**
This course covers legal and regulatory processes, privacy and security rules as applied to the coding environment. Topics include legal terminology, health record laws and regulations, internal and external standards and regulations, data security, storage and retrieval, and access and disclosure. Upon completion, students should be able to apply healthcare legal terminology, maintain a legally defensible health record, comply with state and federal privacy and security laws, and adhere to security policies and procedures.

### Credit Hours

2

## AMC202 - Coding for Reimbursement

### Overview

**Course Description**
This course covers the revenue cycle and reimbursement for acute and ambulatory care. Topics include payment methodologies and systems, utilization review, case management, billing processes and procedures, and fraud and abuse. Upon completion, students should be able to apply policies and procedures for the use of data required in healthcare reimbursement, evaluate the revenue cycle, and identify potential fraud and abuse.

### Credit Hours

2

## AMC203 - Intermediate International Classes of Diseases Diagnoses

### Overview

**Course Description**
This course covers the proper application of ICD diagnosis coding conventions and guidelines and application of codes. Emphasis is placed on reviewing clinical documentation to determine appropriate code selection. Upon completion, students should be able to accurately assign and sequence diagnosis codes according to the current coding and reporting requirements for acute care and outpatient services.

### Credit Hours

3

## AMC204 - Intermediate International Classification of Diseases Procedures

### Overview

**Course Description**
This course covers ICD procedure coding conventions and guidelines, Procedure Coding System (PCS) Table navigation, and application of codes. Emphasis is placed on the interrelationship between anatomy and physiology and the application of procedure codes by reviewing clinical documentation to determine procedure intent and extent. Upon completion, students should be able to navigate the PCS tables to accurately assign and sequence diagnosis codes according to the current coding and reporting requirements for acute care and outpatient services.

### Credit Hours
3

## AMC205 - Intermediate Current Procedural Terminology Coding

### Overview
**Course Description**
This course covers the application of Current Procedural Terminology (CPT) and Healthcare Common Procedure Coding System (HCPCS) codes as applied to current coding and reporting requirements. Emphasis is placed on the interrelationship between anatomy and physiology and the application of procedure codes by reviewing clinical documentation. Upon completion, students should be able to apply the official CPT and HCPCS Level II coding guidelines, and apply the appropriate reporting measures such as modifiers.

### Credit Hours
3

## AMC206 - Clinical Documentation

### Overview
**Course Description**
This course covers the importance of clinical documentation and its role in accurate coding. Topics include communication with providers, documentation in the health record, how to formulate ethical queries to clarify conflicting diagnoses, and implications of accurate coding. Upon completion, students should be able to identify discrepancies between supporting documentation and coded data and develop appropriate physician queries.

### Credit Hours
3

## AMC207 - Advanced Medical Coding Lab I

### Overview
**Course Description**
This course covers the practical application of current ICD diagnosis and CPT guidelines by using encoders to code patient charts. Emphasis is on analyzing and applying current regulations and established guidelines in clinical classification systems by using standard data set definitions and resources. Upon completion, students should be able to accurately code a variety of chart types and recommend coding resources.

### Credit Hours
2

## AMC209 - Professional Practice Experience

### Overview
**Course Description**
This course provides supervised clinical coding experience in healthcare settings. Emphasis is placed on the practical application of coding concepts through demonstration of critical thinking and integration of didactic and clinical components. Upon completion, students should be able to demonstrate the comprehensive knowledge required of an advanced level coder.

### Credit Hours
2

## ANS110 - Animal Science

### Overview
**Course Description**
This course introduces the livestock industry. Topics include nutrition, reproduction, production practices, diseases, meat processing, sustainable livestock production, and marketing. Upon completion, students should be able to demonstrate a basic understanding of livestock production practices and the economic impact of livestock locally, regionally, state-wide, and internationally.

### Credit Hours
3

**Course Typically Offered**
Fall

### Student Learning Outcomes

**Objectives**
Describe the importance of animal production and explain the major issues related to the production of livestock on an international, national, and state level.

**Objectives**
Explain the relationship of science and animal production through the studies of biotechnology, technology, genetics, physiology, nutrition, and health.

**Objectives**
Describe the basic physiology and terminology of the animal industries.

**Objectives**
Describe the production (including sustainable production) methodologies of the swine, beef, dairy, sheep and horse industries.

**Objectives**
Recognize the requirements of production animals, and the benefits of proper care, nutrition, genetics, and environment to the animal's productivity levels.

## ANS111 - Sustainable Livestock Management

### Overview

**Course Description**
This course covers the integration of livestock as part of a sustainable farming system, with emphasis on small-scale production for niche markets and pasture. The course will cover appropriate breed selection, nutrition and living requirements for livestock such as goats, hogs, sheep, poultry, and bees. Upon completion, students will recognize appropriate breeds for their farm needs and demonstrate knowledge of small scale livestock production.

### Credit Hours

3

**Course Typically Offered**
Fall, Spring

### Student Learning Outcomes

**Objectives**
Select appropriate species and breeds for their farm and market needs

**Objectives**
Select appropriate structures and equipment for livestock production

**Objectives**
Create an enterprise budget for one or more species of livestock

**Objectives**
Evaluate farmland for various uses by livestock

**Objectives**
Evaluate feed sources for adequate livestock nutrition

**Objectives**
Develop a pasture management plan appropriate for rotational grazing systems in the southeast.

**Objectives**
Investigate markets and processing facilities appropriate for specific enterprises

## ANT210 - General Anthropology

### Overview

**Course Description**
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. This course has been approved for transfer under the CAA/ICAA as a premajor and/or elective course requirement.

### Credit Hours

3

**Course Typically Offered**
Fall

### Student Learning Outcomes

**Objectives**
Demonstrate an understanding of the four major fields of anthropology

## ANT220 - Cultural Anthropology

### Overview

**Course Description**
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. This course has been approved for transfer under the CAA/ICAA as a premajor and/or elective course requirement.

### Credit Hours

3

**Course Typically Offered**
Spring

### Student Learning Outcomes

**Objectives**
Demonstrate an understanding of the four major fields of anthropology

**Objectives**
Identify basic cultural processes and how cultural data are collected and analyzed.

## ARC111 - Introduction to Architectural Technology

### Overview

**Course Description**
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.

### Credit Hours

3

**Course Typically Offered**
Spring

### Student Learning Outcomes

**Objectives**
Demonstrate proficiency with an Architect and Engineer's scale.

**Objectives**
Illustrate the components that constitute plan views.

**Objectives**
Interpret various plan views for thoroughness and accuracy.

**Objectives**
Create plans through hand drawing and CAD technologies.

## ARS112 - Automotive Restoration Research

### Overview

**Course Description**
This course covers identification and collection of information needed to restore classic automobiles. Emphasis is placed on using books, numbers, emblems, titles, bills of sale, and other documents as resources. Upon completion, students should be able to use reference materials in the area of auto restoration to restore classic vehicles.

### Credit Hours

3

**Course Typically Offered**
Spring

### Student Learning Outcomes

**Objectives**
Research Vintage automobile literature

**Objectives**
Locate and interpret information pertinent to a vintage or collector automobile, such as VIN numbers, part numbers codes of different manufacturers Shop & Service manuals and use the information in restoring them.

**Objectives**
Find State and Local DMV procedures for Titling

**Objectives**
Locate aftermarket suppliers, catalogues, remanufactures of reproduction parts

**Objectives**
Use Internet search engines

## ARS113 - Automobile Upholstery

### Overview

**Course Description**
This course covers automobile upholstery work used in restoration of classic automobiles. Emphasis is placed on removing, repairing, or reconstructing worn/damaged upholstery material in classic automobiles. Upon completion, students should be able to disassemble, repair/reconstruct, or replace the seats, headliners, door panels, and other components in the interior of vehicles.

### Credit Hours

4

**Course Typically Offered**
Summer

### Student Learning Outcomes

**Objectives**
Disassemble, repair/reconstruct, or replace the seats, headliners, door panels, and other components in the interior of vehicles.

**Objectives**
Operate sewing equipment and tools through lab assignments.

**Objectives**
Identify material types used in vintage vehicles.

## ARS114 - Restoration Skills I

### Overview

**Course Description**
This course covers mechanical, electrical, and upholstery restoration. Emphasis is placed on engines, transmissions, brakes, starters, generators, distributors, and replacement or fabrication of upholstery. Upon completion, students should be able to demonstrate an understanding of the major components contained in a wide range of classic vehicles.

### Credit Hours

4

**Course Typically Offered**
Summer

### Student Learning Outcomes

**Objectives**
Demonstrate and understanding of the major components contained in a wide range of classic vehicles.

**Objectives**
Identify powertrain components using labeling diagrams.

**Objectives**
Demonstrate upholstery installation through lab activity.

## ARS117 - Automotive Engines

### Overview

**Course Description**
This course covers the repair, rebuilding, and troubleshooting of internal combustion engines. Emphasis is placed on use of tools and equipment to measure reconditioning tolerances of the internal combustion engine. Upon completion, students should be able to disassemble, repair and/or replace, and reassemble an internal combustion engine.

### Credit Hours

2

**Course Typically Offered**
Spring

### Student Learning Outcomes

**Objectives**
Disassemble, repair and/or replace, and reassemble an internal combustion engine.

**Objectives**
Identify all the components of an internal combustion engine.

**Objectives**
Correctly operate measuring tools through lab performance.

## ARS118 - Wood & Metal Restoration

### Overview

**Course Description**
This course introduces various wood materials used in early automobile construction including a general overview of woodworking techniques. Emphasis is placed on wood material, metal behavior, and trim construction. Upon completion, students should be able to perform simple woodworking techniques, attach and remove trim, and be familiar with basic hardware techniques.

### Credit Hours

3

**Course Typically Offered**
Fall

### Student Learning Outcomes

**Objectives**
Perform simple woodworking techniques, attach and remove trim, and be familiar with basic hardware techniques.

**Objectives**
Identify material types.

**Objectives**
Demonstrate proper use of equipment through lab performance.

**Objectives**
Recognize the principals of metal shaping by finding or identifying examples.

## ART111 - Art Appreciation

### Overview

**Course Description**
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. This course has been approved for transfer under the CAA as a general education course in Humanities/Fine Arts. This course has been approved for transfer under the ICAA as a general education course in Humanities/Fine Arts

### Credit Hours

3

**Course Typically Offered**
Fall, Spring, Summer

### Student Learning Outcomes

**Objectives**
Define the origins and historical development of art through the ages.

**Objectives**
Summarize basic concepts, theories, and research as related to the topics listed in the syllabus.

**Objectives**
Identify how architecture, painting, and sculpture were influenced through history.

**Objectives**
Differentiate between artwork styles, periods, and media

## ART114 - Art History Survey I

### Overview

**Course Description**
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. This course has been approved for transfer under the CAA as a general education course in Humanities/Fine Arts. This course has been approved for transfer under the ICAA as a general education course in Humanities/Fine Arts.

### Credit Hours

3

**Course Typically Offered**
Fall

### Student Learning Outcomes

**Objectives**
Define and use standard terms of art history.

**Objectives**
Identify specific art styles studied, their time period, and cultural significance.

**Objectives**
Relate art of each period studied to its historical and cultural context.

**Objectives**
Discuss the works of recognized artists in terms of the principal influences upon their art, their artistic concerns and stylistic characteristics, and the media they used.

**Objectives**
Attribute unfamiliar works of art to an artist, to a time period, and to a country, culture, and/or style.

## ART115 - Art History Survey II

### Overview

**Course Description**
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. This course has been approved for transfer under the CAA as a general education course in Humanities/Fine Arts. This course has been approved for transfer under the ICAA as a general education course in Humanities/Fine Arts.

### Credit Hours
3

**Course Typically Offered**
Spring

### Student Learning Outcomes

**Objectives**
Define and use standard terms of art history.

**Objectives**
Identify specific art styles studied, their time period, and cultural significance.

**Objectives**
Relate art of each period studied to its historical and cultural context.

**Objectives**
Discuss the works of recognized artists in terms of the principal influences upon their art, their artistic concerns and stylistic characteristics, and the media they used.

**Objectives**
Attribute unfamiliar works of art to an artist, to a time period, and to a country, culture, and/or style.

## ART131 - Drawing I

### Overview

**Course Description**
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. This course has been approved for transfer under the CAA as a general education course in Humanities/Fine Arts. This course has been approved for transfer under the ICAA as a general education course in Humanities/Fine Arts.

### Credit Hours
3

**Course Typically Offered**
Fall, Spring

### Student Learning Outcomes

**Objectives**
Develop an expanded visual awareness and more accurate, open and clear perception.

**Objectives**
Draw with a variety of tools and materials with increasing competence.

**Objectives**
Describe the concept of abstraction in drawing.

**Objectives**
Appraise drawing as both a fundamental and important artistic activity.

## ART132 - Drawing II

### Overview

**Course Description**
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. This course has been approved for transfer under the CAA as a general education course in Humanities/Fine Arts. This course has been approved for transfer under the ICAA as a general education course in Humanities/Fine Arts.

### Credit Hours
3

### Requisites

**Simple Requisites**

**State prerequisite**
**Type**
Prerequisite

Take ART-131

Take ART-131;

## ASL111 - Elementary ASL I

### Overview

**Course Description**
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. This course has been approved for

transfer under the CAA as a general education course in Humanities/Fine Arts. This course has been approved for transfer under the ICAA as a general education course in Humanities/Fine Arts.

### Credit Hours
3

**Course Typically Offered**
Fall

### Student Learning Outcomes

**Objectives**
Discuss deaf culture as it relates to ASL

**Objectives**
Define the parameters of ASL

**Objectives**
Interpret and formulate basic signs

**Objectives**
Exchange personal information via ASL

**Objectives**
Complete a basic conversation using only ASL

## ASL112 - Elementary ASL II

### Overview
**Course Description**
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. This course has been approved for transfer under the CAA as a general education course in Humanities/Fine Arts. This course has been approved for transfer under the ICAA as a general education course in Humanities/Fine Arts.

### Credit Hours
3

**Course Typically Offered**
Spring

### Requisites
**Simple Requisites**

**State prerequisite**
**Type**
Prerequisite

Take ASL-111

Take ASL-111(S11976);

### Student Learning Outcomes

**Objectives**
Communicate effectively using ASL for a variety of purposes

**Objectives**
Interpret and respond with accuracy to expressive ASL, with increasing grammatical complexity.

**Objectives**
Demonstrate cultural awareness of the deaf community

**Objectives**
Complete a 10-minute conversation, retell events, and give specific directions using only ASL.

## ASL211 - Intermediate ASL I

### Overview
**Course Description**
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. This course has been approved for transfer under the CAA as a general education course in Humanities/Fine Arts. This course has been approved for transfer under the ICAA as a general education course in Humanities/Fine Arts.

### Credit Hours
3

**Course Typically Offered**
Fall

### Requisites
**Simple Requisites**

**State prerequisite**
**Type**
Prerequisite

Take ASL-112

Take ASL-112(S16231);

## Student Learning Outcomes

**Objectives**
Express meaning through multiple signs rather than focusing on individual signs

**Objectives**
Confirm information by asking questions or using a sign in context

**Objectives**
Interpret the whole meaning/context of a conversation

# ASL212 - Intermediate ASL II

## Overview

**Course Description**
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. This course has been approved for transfer under the CAA as a general education course in Humanities/Fine Arts. This course has been approved for transfer under the ICAA as a general education course in Humanities/Fine Arts.

## Credit Hours

3

## Requisites

**Simple Requisites**

**State prerequisite**
**Type**
Prerequisite

Take ASL-211

Take ASL-211(S13118);

## Student Learning Outcomes

**Objectives**
Express spontaneous and accurate meaning through multiple signs

**Objectives**
Receive and understand spontaneous the whole context of signed message

**Objectives**
Understand not only the message but cultural context in signed conversation

# AST111 - Descriptive Astronomy

## Overview

**Course Description**
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. This course has been approved for transfer under the CAA as a general education course in Natural Science. This course has been approved for transfer under the ICAA as a general education course in Natural Science.

## Credit Hours

3

## Requisites

**Simple Requisites**

**Required concurrent or previous courses**
**Type**
Corequisite

Take AST-111A

Take AST-111A;

# AST111A - Descriptive Astronomy Lab

## Overview

**Course Description**
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. This course has been approved for transfer under the CAA as a general education course in Natural Science. This course has been approved for transfer under the ICAA as a general education course in Natural Science.

## Credit Hours

1

## Requisites

**Simple Requisites**

**State concurrent or previous courses**
**Type**
Corequisite

Take AST-111

Take AST-111;

# ATR112 - Introduction to Automation

## Overview

**Course Description**
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.

## Credit Hours

3

**Course Typically Offered**
Spring

# ATT115 - Green Transportation Safety and Service

## Overview

**Course Description**
This course covers workplace safety, hazardous material and environmental regulation relevant to electric, hybrid and alternative fueled vehicles. Topics include safety of high voltage vehicle systems, gaseous fuel systems and alternative liquid fuels. Upon completion, students should be able to demonstrate safe work practices, utilize appropriate shop tools and explain government regulations associated with alternative transportation.

## Credit Hours

2

# ATT125 - Hybrid-Electric Transportation

## Overview

**Course Description**
This course covers the theory and operation of hybrid-electric drive vehicles. Topics include maintenance, diagnostics, repair and safety procedures for electrically propelled and hybrid vehicles. Upon completion, students should be able to perform diagnostics, maintenance and repair hybrid-electric drive vehicles.

## Credit Hours

4

## Requisites

**Simple Requisites**

**State prerequisite**
**Type**
Prerequisite

Take TRN-120

Take TRN-120(S23456);

# ATT140 - Emerging Transportation Technology

## Overview

**Course Description**
This course covers emerging technologies in the automotive industry and diagnostic procedures associated with those technologies. Topics include exploring new technologies, diagnostic tools, methods and repairs. Upon completion, students should be able to demonstrate practical skills applicable to emerging automotive technologies.

## Credit Hours

3

# AUB111 - Painting & Refinishing I

## Overview

**Course Description**
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.

## Credit Hours

4

**Course Typically Offered**
Fall, Spring

## Student Learning Outcomes

**Objectives**
Identify and use proper equipment and materials in refinishing, following accepted industry standards.

**Objectives**
Review federal, state, and local regulations.

**Objectives**
Demonstrate proper safety procedures through simulations.

**Objectives**
Demonstrate proper paint preparations through lab projects.

**Objectives**
Demonstrate proper painting techniques through lab projects.

# AUB112 - Painting & Refinishing II

## Overview

**Course Description**
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.

## Credit Hours

4

**Course Typically Offered**
Spring

## Requisites

**Simple Requisites**

**State prerequisite**
**Type**
Prerequisite

Take AUB-111

Take AUB-111;

## Student Learning Outcomes

**Objectives**
Perform spot, panel, and overall refinishing repairs and identify and correct refinish problems.

**Objectives**
Identify and correct color matching issues.

**Objectives**
Perform paint correcting task in lab setting.

# AUB114 - Special Finishes

## Overview

**Course Description**
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.

## Credit Hours

2

**Course Typically Offered**
Summer

## Requisites

**Simple Requisites**

**State prerequisite**
**Type**
Prerequisite

Take AUB-111

Take AUB-111;

## Student Learning Outcomes

**Objectives**
Identify and apply specialized finishes based on industry standards.

**Objectives**
Identify and apply proper techniques when painting different types of plastic materials.

**Objectives**
Demonstrate the use of specialized products and additives during the painting process.

# AUB121 - Non-Structural Damage I

## Overview

**Course Description**
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.

## Credit Hours

3

**Course Typically Offered**
Fall, Spring

## Student Learning Outcomes

**Objectives**
Identify and repair minor direct and indirect damage.

**Objectives**
Demonstrate removal and replacing of body panels to accepted standards.

**Objectives**
Perform damage analysis through lab project.

## AUB131 - Structural Damage I

### Overview

**Course Description**
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.

### Credit Hours

4

**Course Typically Offered**
Fall

### Student Learning Outcomes

**Objectives**
Analyze and perform repairs to a vehicle which has received light/moderate structural damage.

**Objectives**
Demonstrate proper use of vehicle measuring equipment through lab simulations.

**Objectives**
Perform welded panel replacement in a lab setting.

## AUB162 - Autobody Estimating

### Overview

**Course Description**
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.

### Credit Hours

2

**Course Typically Offered**
Spring

### Student Learning Outcomes

**Objectives**
Prepare and interpret a damage report.

**Objectives**
Demonstrate proper use of a collision estimating program.

**Objectives**
Define estimating terminology.

## AUT114 - Safety and Emissions

### Overview

**Course Description**
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.

### Credit Hours

2

**Course Typically Offered**
Summer

### Student Learning Outcomes

**Objectives**
Review the rules pertaining to North Carolina state inspections.

**Objectives**
Perform a North Carolina State Safety Inspection.

**Objectives**
Perform a North Carolina State Emission Inspection

**Objectives**
Pass both safety and emission test with a score of 80% or above.

# AUT114A - Safety and Emissions Lab

## Overview

**Course Description**
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.

## Credit Hours

1

**Course Typically Offered**
Summer

## Requisites

**Simple Requisites**

**State concurrent or previous courses**
**Type**
Corequisite

Take AUT-114

Take AUT-114(S21685);

## Student Learning Outcomes

**Objectives**
Perform a North Carolina State Safety Inspection.

**Objectives**
Perform a North Carolina State Emission Inspection.

# AUT116 - Engine Repair

## Overview

**Course Description**
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.

## Credit Hours

3

**Course Typically Offered**
Fall

## Student Learning Outcomes

**Objectives**
Identify and illustrate the construction of the automotive engine.

**Objectives**
Perform and interpret basic diagnosis of an engine using appropriate tools.

**Objectives**
Locate and review the removal, repair, specification, reassembly, and reinstallation of the engine.

**Objectives**
Measure and description of automotive engines using appropriate tools, equipment, procedures, and service information.

**Objectives**
Evaluate the engines condition and assess the repairs of an automotive engines

# AUT116A - Engine Repair Lab

## Overview

**Course Description**
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.

## Credit Hours

1

**Course Typically Offered**
Fall

## Requisites

**Simple Requisites**

**State concurrent or previous courses**
**Type**
Corequisite

Take AUT-116

Take AUT-116(S21687);

### Student Learning Outcomes

**Objectives**
Perform and interpret basic diagnosis of an engine using appropriate tools.

**Objectives**
Locate and review the removal, repair, specification, reassembly, and reinstallation of the engine.

**Objectives**
Measure and description of automotive engines using appropriate tools, equipment, procedures, and service information.

**Objectives**
Evaluate the engines condition and assess the repairs of an automotive engines

## AUT141 - Suspension & Steering Systems

### Overview

**Course Description**
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.

### Credit Hours

3

**Course Typically Offered**
Spring

### Student Learning Outcomes

**Objectives**
Identify steering and suspension components.

**Objectives**
Evaluate steering and suspension components.

**Objectives**
Describe the service and repair of steering and suspension components.

**Objectives**
Students will practice repair simulations on the steering and suspension system.

## AUT141A - Suspension & Steering Lab

### Overview

**Course Description**
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.

### Credit Hours

1

**Course Typically Offered**
Spring

### Requisites

**Simple Requisites**

**State concurrent or previous courses**
**Type**
Corequisite

Take AUT-141

Take AUT-141(S21690);

### Student Learning Outcomes

**Objectives**
Identify steering and suspension components.

**Objectives**
Evaluate steering and suspension components.

**Objectives**
Describe the service and repair of steering and suspension components.

**Objectives**
Students will practice repair simulations on the steering and suspension system.

# AUT151 - Brake Systems

## Overview

**Course Description**
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.

## Credit Hours

3

**Course Typically Offered**
Fall

## Student Learning Outcomes

**Objectives**
Research vehicle service information such as fluid type, vehicle service history, service precautions, technical service bulletins, and recalls including vehicles equipped with advanced driver assistance systems (ADAS).

**Objectives**
Identify brake system components and configurations.

**Objectives**
Demonstrate understanding of hydraulic principals (Pascal's law)

**Objectives**
Identify components of the brake power assist system (vacuum/ hydraulic/electric).

**Objectives**
Identify electronic brake control system components and describe function (ABS, TCS, ESC).

**Objectives**
Describe the operation of a regenerative braking system.

# AUT151A - Brakes Systems Lab

## Overview

**Course Description**
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.

## Credit Hours

1

**Course Typically Offered**
Fall

## Requisites

**Simple Requisites**

**State concurrent or previous courses**
**Type**
Corequisite

Take AUT-151

Take AUT-151(S21692);

## Student Learning Outcomes

**Objectives**
Identify brake system components and configurations.

**Objectives**
Demonstrate the principles of how Pascal's law is used in the hydraulic systems of an automobile.

**Objectives**
Identify components of the brake power assist system (vacuum/ hydraulic/electric).

**Objectives**
Identify electronic brake control system components and describe function (ABS, TCS, ESC).

# AUT163 - Advanced Automotive Electricity

## Overview

**Course Description**
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.

### Credit Hours
3

**Course Typically Offered**
Spring

### Requisites
**Simple Requisites**

**State prerequisite**
**Type**
Prerequisite

Take TRN-120

Take TRN-120(S23456);

### Student Learning Outcomes

**Objectives**
Observe and perform safety procedures related to electronic systems.

**Objectives**
Identify vehicle identification numbers, electronic service information, and service repair orders.

**Objectives**
Methodically approach and diagnosis problems in electrical/electronic systems, in order to make a direct, thorough and economical diagnosis.

**Objectives**
Preform basic testing and service on body electrical/electronic systems and basic electrical systems.

**Objectives**
Perform basic “in-car” diagnostics and repairs.

## AUT163A - Advanced Automotive Electricity Lab

### Overview

**Course Description**
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 networking and module communication, circuit construction, wiring diagrams, circuit testing, troubleshooting and emerging electrical/electronic systems technologies. Upon completion, students should be able to properly use wiring diagrams, diagnose, test, and repair wiring, lighting, gauges, accessories, modules, and electronic concerns.

### Credit Hours
1

**Course Typically Offered**
Spring

### Requisites
**Simple Requisites**

**State concurrent or previous courses**
**Type**
Corequisite

Take AUT-163

Take AUT-163(S21698);

### Student Learning Outcomes

**Objectives**
Observe and perform safety procedures related to electronic systems.

**Objectives**
Identify vehicle identification numbers, electronic service information, and service repair orders.

**Objectives**
Methodically approach and diagnosis problems in electrical/electronic systems, in order to make a direct, thorough and economical diagnosis.

**Objectives**
Perform basic testing and service on body electrical/electronic systems and basic electrical systems.

**Objectives**
Perform basic “in-car” diagnostics and repairs.

**Objectives**
Demonstrate the basic concepts and procedures to successfully repair late model electrical/electronic systems.

# AUT181 - Engine Performance 1

## Overview

**Course Description**
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.

## Credit Hours

3

**Course Typically Offered**
Spring

## Student Learning Outcomes

**Objectives**
Identify engine type and engine management systems.

**Objectives**
Utilize technical specifications and troubleshooting procedures.

**Objectives**
Analyze and test engine mechanical soundness.

**Objectives**
Diagnose and repair vacuum leaks.

**Objectives**
Diagnose electrical/electronic system problems and make necessary repairs.

**Objectives**
Perform no starting and hard starting diagnostic procedures.

**Objectives**
Troubleshoot drivability problems and determine needed repairs.

**Objectives**
Perform on-board computer diagnostics.

**Objectives**
Inspect and repair engine fuel systems.

**Objectives**
Inspect and service exhaust systems.

**Objectives**
Perform routine scheduled maintenance procedures.

# AUT181A - Engine Performance 1 Lab

## Overview

**Course Description**
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 overviews of engine operation, ignition components and systems, fuel delivery, injection components and systems and emission control devices and emerging engine performance technologies. 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.

## Credit Hours

1

**Course Typically Offered**
Spring

## Requisites

**Simple Requisites**

**State concurrent or previous courses**
**Type**
Corequisite

Take AUT-181

Take AUT-181(S21701);

## Student Learning Outcomes

**Objectives**
Identify engine type and engine management systems.

**Objectives**
Utilize technical specifications and troubleshooting procedures.

**Objectives**
Analyze and test engine mechanical soundness.

**Objectives**
Diagnose and repair vacuum leaks.

**Objectives**
Diagnose electrical/electronic system problems and make necessary repairs.

**Objectives**
Perform no starting and hard starting diagnostic procedures.

**Objectives**
Troubleshoot drivability problems and determine needed repairs.

**Objectives**
Perform on-board computer diagnostics.

**Objectives**
Inspect and repair engine fuel systems.

**Objectives**
Inspect and service exhaust systems.

**Objectives**
Perform routine scheduled maintenance procedures.

# AUT183 - Engine Performance 2

## Overview

**Course Description**
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.

## Credit Hours

4

**Course Typically Offered**
Summer

## Requisites

**Simple Requisites**

**State prerequisite**
**Type**
Prerequisite

Take AUT-181

Take AUT-181(S21701);

## Student Learning Outcomes

**Objectives**
Describe, diagnose, and repair engine fuel delivery/management and emission control systems using appropriate service information and diagnostic equipment.

**Objectives**
Utilize technical specifications and troubleshooting procedures.

**Objectives**
Locate circuit components using wiring diagrams.

**Objectives**
Select and set up test equipment.

**Objectives**
Troubleshoot drivability problems and determine needed repairs.

**Objectives**
Inspect, test and repair engine fuel systems.

**Objectives**
Test and replace faulty components

**Objectives**
Analyze and interpret exhaust emissions values.

**Objectives**
Perform on-board computer diagnostics (OBD 1 and OBD 2).

**Objectives**
Perform circuit and connector repairs.

**Objectives**
Perform emission control systems diagnostics and repair.

## AUT221 - Automatic Transmissions/Transaxles

### Overview

**Course Description**
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.

### Credit Hours

3

**Course Typically Offered**
Spring

### Student Learning Outcomes

**Objectives**
Observe automatic transmission/ transaxle safety procedures

**Objectives**
Identify vehicle identification numbers, electronic service information, and service repair orders.

**Objectives**
Methodically approach and diagnosis problems in automatic transmissions/ transaxles, in order to make a direct, thorough and economical diagnosis.

**Objectives**
Do basic adjustments and service on automatic transmissions.

**Objectives**
Perform basic “in-car” diagnostics and repairs.

**Objectives**
Articulate the basic concepts and procedures to successfully rebuild late model transmissions and transaxles.

## AUT221A - Automatic Transmissions/ Transaxles Lab

### Overview

**Course Description**
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.

### Credit Hours

1

**Course Typically Offered**
Spring

### Requisites

**Simple Requisites**

**State concurrent or previous courses**
**Type**
Corequisite

Take AUT-221

Take AUT-221(S21707);

### Student Learning Outcomes

**Objectives**
Observe automatic transmission/ transaxle safety procedures

**Objectives**
Identify vehicle identification numbers, electronic service information, and service repair orders.

**Objectives**
Methodically approach and diagnosis problems in automatic transmissions/ transaxles, in order to make a direct, thorough and economical diagnosis.

**Objectives**
Do basic adjustments and service on automatic transmissions.

**Objectives**
Perform basic “in-car” diagnostics and repairs.

**Objectives**
Articulate the basic concepts and procedures to successfully rebuild late model transmissions and transaxles.

# AUT231 - Manual Transmissions/Transaxles/ Drive Trains

## Overview

**Course Description**
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.

## Credit Hours

3

**Course Typically Offered**
Fall

## Student Learning Outcomes

**Objectives**
Research vehicle service information such as fluid type, vehicle service history, service precautions, technical service bulletins, and recalls including vehicles equipped with advanced driver assistance systems (ADAS).

**Objectives**
Identify manual drive train and axles components and configurations.

**Objectives**
Inspect clutch pedal linkage, cables, automatic adjuster mechanisms, brackets, bushings, pivots, and springs; determine needed action.

**Objectives**
Diagnose transmission/transaxle gear reduction/multiplication concerns using driving, driven, and held member (power flow) principles.

# AUT231A - Manual Transmissions/Transaxles/ Drive Trains Lab

## Overview

**Course Description**
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.

## Credit Hours

1

**Course Typically Offered**
Fall

## Requisites

**Simple Requisites**

**State concurrent or previous courses**
**Type**
Corequisite

Take AUT-231

Take AUT-231(S21711);

## Student Learning Outcomes

**Objectives**
Research vehicle service information such as fluid type, vehicle service history, service precautions, technical service bulletins, and recalls including vehicles equipped with advanced driver assistance systems (ADAS).

**Objectives**
Identify manual drive train and axles components and configurations.

**Objectives**
Inspect clutch pedal linkage, cables, automatic adjuster mechanisms, brackets, bushings, pivots, and springs; determine needed action.

**Objectives**
Diagnose transmission/transaxle gear reduction/multiplication concerns using driving, driven, and held member (power flow) principles.

# AUT281 - Advanced Engine Performance

## Overview

**Course Description**
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.

## Credit Hours

3

**Course Typically Offered**
Fall

## Student Learning Outcomes

**Objectives**
Explain the operation of computerized engine controls to monitor, adjust, and control various engine functions.

**Objectives**
Locate relevant service information.

**Objectives**
Research system operation using technical information to determine diagnostic procedure.

**Objectives**
Use appropriate diagnostic procedures based on available vehicle data and service information.

**Objectives**
Use appropriate test equipment to diagnose problems with electronic sensors, controllers, and circuits.

**Objectives**
Differentiate between powertrain mechanical and electrical/electronic problems.

**Objectives**
Determine root cause of failures.

**Objectives**
Differentiate between communication protocols.

**Objectives**
Interpret scan tool data and lab scope patterns to determine system condition.

**Objectives**
Establish relative importance of displayed scan tool data.

**Objectives**
Diagnose and service emission control components and circuits using established and recommended test procedures.

**Objectives**
Verify effectiveness of repairs.

# BAR111 - Barbering Concepts I

## Overview

**Course Description**
This course introduces basic barbering concepts and includes careers in barber styling and various hair treatments. Emphasis is placed on sanitizing equipment, professional ethics, skin, scalp and hair disorders and treatment and safe work practices. Upon completion, students should be able to safely and competently apply barbering concepts in the shop setting.

## Credit Hours

4

**Course Typically Offered**
Fall, Spring

## Requisites

**Simple Requisites**

**State concurrent or previous courses**
**Type**
Corequisite

Take BAR-112

Take BAR-112;

## Student Learning Outcomes

**Objectives**
Discuss the history and evolution of barbering, including its cultural significance and impact on modern practices.

**Objectives**
Explain the statutes and regulations relating to the practice of barbering in North Carolina.

**Objectives**
Describe and evaluate the principles of sanitation, hygiene, and infection control, including sterilization and antiseptics.

**Objectives**
Analyze and discuss the shedding and regrowth of hair, including hair loss disorders and treatments.

**Objectives**
Identify and describe the structure and function of the skin and hair, including common disorders and diseases.

**Objectives**
Examine the pharmacology of barbering products and their effects on hair and scalp.

## BAR112 - Barbering Clinic I

### Overview

**Course Description**
This course introduces basic clinic services. Topics include a study of sanitizing procedures for implements and equipment, determination of hair texture, hair cutting, and hair processing. Upon completion, students should be able to safely and competently demonstrate shop services.

### Credit Hours

8

**Course Typically Offered**
Fall, Spring

### Requisites

**Simple Requisites**

**State concurrent or previous courses**
**Type**
Corequisite

Take BAR-111

Take BAR-111;

### Student Learning Outcomes

**Objectives**
Demonstrate proper infection control and safe work practices in a barbering environment.

**Objectives**
Perform proper cleaning and disinfection of nonelectrical tools, implements, clippers, and outliners.

**Objectives**
Demonstrate correct handwashing techniques and handling of exposure incidents.

**Objectives**
Perform shampooing and the application of creams and lotions according to industry standards.

**Objectives**
Demonstrate draping procedures for wet, chemical, and haircutting services.

**Objectives**
Perform scalp massage manipulations and treatment variations.

## BAR113 - Barbering Concepts II

### Overview

**Course Description**
This course covers more comprehensive barbering concepts. Topics include safety and sanitation, product knowledge as well as both wet and thermal hairstyling. Upon completion, students should be able tosafely and competently apply these barbering concepts in the shop setting.

### Credit Hours

4

**Course Typically Offered**
Spring

### Requisites

**Simple Requisites**

**State concurrent or previous courses**
**Type**
Corequisite

Take BAR-114

Take BAR-114;

## Student Learning Outcomes

**Objectives**
Identify and explain the structure and function of the skin, including common disorders and diseases.

**Objectives**
Analyze the properties and disorders of hair and scalp to determine appropriate treatment recommendations.

**Objectives**
Explain the elementary chemistry related to sterilization, antiseptics, and product formulation.

**Objectives**
Describe the effects of electrical appliances on the skin and hair.

**Objectives**
Identify and analyze the nerve points of the face and their role in facial massage.

**Objectives**
Examine and describe the benefits of facial massage techniques and treatments.

# BAR114 - Barbering Clinic II

## Overview

**Course Description**
This course provides experience in a simulated shop setting. Topics include draping, shampooing, hair cutting, and hair drying as well as chemical processing. Upon completion, students should be able tosafely and competently apply these barbering concepts in the shop setting.

## Credit Hours

8

**Course Typically Offered**
Spring

## Requisites

**Simple Requisites**

**State concurrent or previous courses**
**Type**
Corequisite

Take BAR-113

Take BAR-113;

## Student Learning Outcomes

**Objectives**
Perform men's facial massage techniques and treatments following proper procedures.

**Objectives**
Utilize facial steamers and brush machines safely and effectively in facial treatments.

**Objectives**
Demonstrate proper handling, positioning, and stroking techniques with a straight razor.

**Objectives**
Execute professional shaving and facial hair design services according to barbering standards.

**Objectives**
Perform men's haircutting techniques including taper, fade, and precision cuts.

**Objectives**
Demonstrate styling techniques such as blow-drying, pompadour styling, and braiding.

# BAR115 - Barbering Concepts III

## Overview

**Course Description**
This course covers more comprehensive barbering concepts. Topics include hair processing as well as finger waving, wet and thermal hairstyling, skin care, including electricity/light therapy, and manicuring. Upon completion, students should be able to safely andcompetently apply these barbering concepts in the shop setting.

## Credit Hours
4

**Course Typically Offered**
Summer

## Requisites
**Simple Requisites**

**State concurrent or previous courses**
**Type**
Corequisite

Take BAR-116

Take BAR-116;

## Student Learning Outcomes

**Objectives**
Examine the fundamentals of men's hair replacement and its role in barbering services.

**Objectives**
Analyze and apply the principles of women's haircutting and styling in theory-based scenarios.

**Objectives**
Explain the chemical processes involved in texture services such as perming and relaxing.

**Objectives**
Assess the impact of hair coloring and lightening on hair structure and how to select the appropriate products.

**Objectives**
Compare and contrast different chemical texture services and their effect on hair composition.

**Objectives**
Evaluate the safety and regulatory considerations related to chemical services in barbering.

# BAR116 - Barbering Clinic III

## Overview

**Course Description**
This course covers more comprehensive barbering concepts. Emphasis is placed on intermediate-level of skin care manicuring, scalp treatments, hair design, chemical restructuring and other related topics. Upon completion, students should be able to safely andcompetently apply these barbering concepts in the shop setting.

## Credit Hours
4

**Course Typically Offered**
Summer

## Requisites
**Simple Requisites**

**State concurrent or previous courses**
**Type**
Corequisite

Take BAR-115

Take BAR-115;

## Student Learning Outcomes

**Objectives**
Apply men's hair replacement techniques, including template making and full-head bonding.

**Objectives**
Demonstrate proper application and removal of hair replacement systems.

**Objectives**
Perform cleaning and maintenance of wigs and human hair replacement systems.

**Objectives**
Analyze and apply chemical services such as coloring and perming on hair replacement systems.

**Objectives**
Execute women's haircutting and styling techniques, including blunt and layered cuts.

**Objectives**
Demonstrate hair straightening and pressing techniques using appropriate tools and methods.

# BAR117 - Barbering Concepts IV

## Overview

**Course Description**
This course covers advanced barbering concepts. Topics include hair color, advanced hair cutting techniques, hair styling, shaving, skin care, retailing, and preparing for a job interview. Upon completion, students should be able to demonstrate an understanding of these barbering concepts and meet program completion requirements.

## Credit Hours

2

**Course Typically Offered**
Fall

## Requisites

**Simple Requisites**

**State concurrent or previous courses**
**Type**
Corequisite

Take BAR-118

Take BAR-118;

## Student Learning Outcomes

**Objectives**
Develop a career plan including preparation for licensure and employment in the barbering industry.

**Objectives**
Analyze the skills and qualities required to work effectively behind the barber chair.

**Objectives**
Examine the business aspects of running a successful barbering practice, including marketing and customer relations.

**Objectives**
Identify and evaluate state board requirements and regulations for barbering licensure.

**Objectives**
Assess the importance of continuing education and professional development in the barbering field.

**Objectives**
Examine strategies for financial management and pricing services in a barbering business.

# BAR118 - Barbering Clinic IV

## Overview

**Course Description**
This course provides advanced experience in a simulated shop setting. Emphasis is placed on efficient and competent delivery of all shop services in preparation for the licensing examination and employment. Upon completion, students should be able to demonstrate competence in the areas covered on the Barbering Licensing Examination and meet entry-level employment requirements.

## Credit Hours

7

**Course Typically Offered**
Fall

## Requisites

**Simple Requisites**

**State concurrent or previous courses**
**Type**
Corequisite

Take BAR-117

Take BAR-117;

## Student Learning Outcomes

**Objectives**
Perform chemical texture services such as permanent waving and hair relaxing.

**Objectives**
Demonstrate proper patch and strand testing before hair coloring procedures.

**Objectives**
Apply various hair coloring techniques, including single-process and double-process applications.

**Objectives**
Execute special effects coloring techniques such as highlights and lowlights.

**Objectives**
Demonstrate proper beard and mustache coloring techniques.

**Objectives**
Demonstrate proficiency in practical skills required to pass the state board mock exam.

## BAR119 - Trichology and Chemistry

### Overview

**Course Description**
This course introduces basic principles associated with the study of the hair and scalp and the interaction of applied chemicals. Emphasis is placed on pH actions, the reactions and effects of chemical ingredients, and the impact of healthcare and wellness as it relates to hair loss. Upon completion, students should be able to demonstrate an understanding of chemical terminology, pH testing, and chemical reactions on hair.

### Credit Hours

2

**Course Typically Offered**
Fall

### Student Learning Outcomes

**Objectives**
Describe the fundamental principles of trichology, including the structure and function of the hair and scalp.

**Objectives**
Analyze environmental and genetic factors that influence hair health and scalp conditions.

**Objectives**
Evaluate the relationship between healthcare, wellness, and hair loss, identifying contributing factors and prevention methods.

**Objectives**
Define key trichology, healthcare, and wellness terminology as it relates to barbering consultations and services.

**Objectives**
Explain key scientific principles related to trichology and their application in hair care services.

## BAR121 - Contemporary Hair Coloring

### Overview

**Course Description**
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 client's color needs and safely and competently perform color applications and correct problems.

### Credit Hours

2

**Course Typically Offered**
Spring

### Requisites

**Simple Requisites**

**State prerequisite**
**Type**
Prerequisite

Take All: BAR-111 and BAR-112

Take BAR-111 BAR-112;

### Student Learning Outcomes

**Objectives**
Demonstrate the use of a triscope to study the hair and scalp.

**Objectives**
Discuss healthcare and wellness topics that deal with hair loss issues.

**Objectives**
Safely and competently apply trichology healthcare and wellness concepts in the shop setting.

**Objectives**
Demonstrate safe work practices.

# BAS120 - Introduction to Analytics

## Overview

**Course Description**
This course introduces basic concepts and applications of analytics. Topics include an overview of the analytical process and the role of the analyst, applied descriptive statistics, and exploratory data analysis. Upon completion, students should be able to demonstrate a basic understanding of analytics for decision-making in business.

## Credit Hours

3

**Course Typically Offered**
Fall

# BAS121 - Data Visualization

## Overview

**Course Description**
This course introduces key concepts in data visualization and reporting. Topics include concepts and methods used in graphical representation of data, exploration and reporting of data, and basic linear regression methods. Upon completion, students should be able to effectively use graphical tools to communicate insights about data.

## Credit Hours

3

## Requisites

**Simple Requisites**

**State prerequisite**
**Type**
Prerequisite

Take BAS-120

Take BAS-120(S24318);

# BAS150 - Introduction to Analytical Programming

## Overview

**Course Description**
This course introduces statistical software for analytics. Topics include utilization of analytical and statistical software packages for data management, data visualization, and exploratory data analysis. Upon completion, students should be able to use statistical programming tools to conduct descriptive analytics.

## Credit Hours

3

# BAS220 - Applied Analytical Programming

## Overview

**Course Description**
This course covers applications of statistical software for data management and reporting. Topics include data management, data preprocessing, and modeling including linear and logistic regression analysis using programming tools. Upon completion, students should be able to process data and generate reports that support business decision-making.

## Credit Hours

3

## Requisites

**Simple Requisites**

**State prerequisite**
**Type**
Prerequisite

Take BAS-150

Take BAS-150(S24320);

# BIO106 - Introduction to Anatomy/Physiology/Microbiology

## Overview

**Course Description**
This course covers the fundamental and principle concepts of human anatomy and physiology and microbiology. Topics include an introduction to the structure and function of cells, tissues, and human organ systems, and an overview of microbiology, epidemiology, and control of microorganisms. Upon completion, students should be able to identify structures and functions of the human body and describe microorganisms and their significance in health and disease.

## Credit Hours

3

**Course Typically Offered**
Fall, Spring

## Student Learning Outcomes

**Objectives**
Discuss the principles of anatomy and physiology, and their interrelationships;

**Objectives**
Identify structures and functions of the human body;

**Objectives**
Describe microorganisms and their significance in health and disease.

# BIO110 - Principles of Biology

## Overview

**Course Description**
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.

## Credit Hours

4

**Course Typically Offered**
Fall, Spring, Summer

## Student Learning Outcomes

**Objectives**
Define the principles of life and apply the scientific method.

**Objectives**
Recognize basic chemistry concepts to biological systems including atomic structure, chemical bonds, properties of water, pH, and biological macromolecules.

**Objectives**
Differentiate between prokaryotic and eukaryotic cells.

**Objectives**
Outline the processes of cell transport and cellular division.

**Objectives**
Summarize how cells utilize and transform energy.

**Objectives**
Describe the basics of Mendelian genetics and be able to perform a Punnett square.

**Objectives**
Identify the structure of DNA and outline the processes of protein synthesis.

**Objectives**
Examine the diversity of life and apply the principles of taxonomy.

**Objectives**
Summarize the basic principles of ecology and how humans impact the environment.

# BIO111 - General Biology I

## Overview

**Course Description**
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.

## Credit Hours

4

**Course Typically Offered**
Fall, Spring, Summer

## Requisites

**Simple Requisites**

**Local**
**Type**
Corequisite

Take ENG-045;

Take 1 group; # Take RED-090 ENG-090; # Take DRE-098(S23643); # Take ENG-011; # Take ENG-111(S25433); # Take ENG-025; # Take ENG-045;

## Student Learning Outcomes

**Objectives**
Apply the scientific method to questions in biology and develop scientific literacy.

**Objectives**
Employ basic chemistry concepts to biological systems including atomic structure, chemical bonds, properties of water, pH, and biological macromolecules.

**Objectives**
Distinguish between a prokaryotic and a eukaryotic cell, in terms of structures and organelles, as well as describe the chemical makeup of cell membrane and the various methods of cellular transport.

**Objectives**
Explain energy transformations as it corresponds to the processes of respiration and photosynthesis.

## BIO112 - General Biology II

### Overview

**Course Description**
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.

### Credit Hours

4

**Course Typically Offered**
Fall, Spring, Summer

### Requisites

**Simple Requisites**

**State prerequisite**
**Type**
Prerequisite

Take BIO-111

Take BIO-111(S24020);

### Student Learning Outcomes

**Objectives**
Explain the theory of evolution.

**Objectives**
Discuss evidence and possible mechanisms of evolution.

**Objectives**
Describe characteristics and differentiate between the major groups of life: bacteria, viruses, protists, fungi, plants, and animals.

**Objectives**
Identify and contrast the major animal systems.

**Objectives**
Compare and contrast the major plant systems.

**Objectives**
Summarize the basic principles of ecology and how humans impact the environment.

## BIO120 - Introductory Botany

### Overview

**Course Description**
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.

### Credit Hours

4

### Requisites

**Simple Requisites**

**State prerequisite**
**Type**
Prerequisite

Take One: BIO-110 or BIO-111

Take BIO-110(S13284) or BIO-111(S13307);

## BIO130 - Introductory Zoology

### Overview

**Course Description**
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.

### Credit Hours

4

## Requisites

**Simple Requisites**

**State prerequisite**
**Type**
Prerequisite

Take One: BIO-110 or BIO-111

Take BIO-110(S13284) or BIO-111(S13307);

# BIO140 - Environmental Biology

## Overview

**Course Description**
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.

## Credit Hours

3

**Course Typically Offered**
Fall

## Requisites

**Simple Requisites**

**Required concurrent or previous courses**
**Type**
Corequisite

Take BIO-140A

Take BIO-140A;

## Student Learning Outcomes

**Objectives**
Identify the components and interactions of environmental systems.

**Objectives**
Describe human population growth and how this affects food and agriculture

**Objectives**
Describe ecological concepts

**Objectives**
Describe climate change and how humans effect it

**Objectives**
Define the various energy resources

**Objectives**
Summarize both air and water pollution

**Objectives**
Give examples and classify organisms in the major taxonomic categories

**Objectives**
Identify water resources and their impact on water quality.

# BIO140A - Environmental Biology Lab

## Overview

**Course Description**
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.

## Credit Hours

1

**Course Typically Offered**
Fall

## Requisites

**Simple Requisites**

**State concurrent or previous courses**
**Type**
Corequisite

Take BIO-140

Take BIO-140;

## Student Learning Outcomes

**Objectives**
Identify and understand environmental systems

**Objectives**
Describe human population growth and how this affects food and agriculture

**Objectives**
Describe ecological concepts

**Objectives**
Describe climate change and how humans effect it

**Objectives**
Define the various energy resources

**Objectives**
Summarize both air and water pollution

**Objectives**
Give examples and classify organisms in the major taxonomic categories

**Objectives**
Have an understanding of water resources and water quality

# BIO155 - Nutrition

## Overview

**Course Description**
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.

## Credit Hours

3

**Course Typically Offered**
Fall, Spring, Summer

## Student Learning Outcomes

**Objectives**
Describe key rules for adhering to a healthy diet

**Objectives**
Demonstrate ability to adhere to rules for evaluating nutrition information

**Objectives**
Explain the process of digestion in the human body

**Objectives**
Explain the relationship between the types of nutrients and their functions in the body

**Objectives**
Discuss key parts of a basic weight management strategy

**Objectives**
Recall important nutrition needs at each life stage

**Objectives**
Identify the major nutrient-related diseases affecting society

# BIO163 - Basic Anatomy & Physiology

## Overview

**Course Description**
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.

## Credit Hours

5

**Course Typically Offered**
Fall, Spring

## Requisites

**Simple Requisites**

**Local**
**Type**
Corequisite

Local requisite: Take ENG-045

# Take ENG-002; # Take ENG-025; # Take ENG-045;

## Student Learning Outcomes

**Objectives**
Identify the principles of life, order the levels of organization, and generalize feedback mechanisms.

**Objectives**
Recognize basic chemistry concepts to biological systems including atomic structure, chemical bonds, properties of water, pH, and biological macromolecules.

**Objectives**
Describe the components of a eukaryotic cell and cell transport.

**Objectives**
Label the major tissues of the human body.

**Objectives**
Identify the anatomical structures associated with the major organ systems.

**Objectives**
Demonstrate a basic understanding of the physiology of the major organ systems.

**Objectives**
Explain the interaction of organ systems to the maintenance of homeostasis.

# BIO168 - Anatomy and Physiology I

## Overview

**Course Description**
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.

## Credit Hours

4

**Course Typically Offered**
Fall, Spring, Summer

## Requisites

**Simple Requisites**

**Local Co-Req**
**Type**
Corequisite

Take ENG-045

Take 1 group; # Take DRE-098(S23643); # Take RED-090 ENG-090; # Take ENG-095; # Take ENG-011; # Take ENG-045; # Take ENG-111(S25433);

## Student Learning Outcomes

**Objectives**
Define the principles of life, describe the levels of organization, and the maintenance of homeostasis across human organ systems.

**Objectives**
Apply basic chemistry concepts to biological systems including atomic structure, chemical bonds, properties of water, pH, and biological macromolecules.

**Objectives**
Diagram the components of a eukaryotic cell, as well as describe the chemical makeup of cell membrane and the various methods of cellular transport and division

**Objectives**
Differentiate the major tissues of the human body.

**Objectives**
Demonstrate an in-depth understanding of the physiology of the integumentary system, the skeletal system, the muscular system, the nervous system, and special senses.

**Objectives**
Apply and analyze homeostatic imbalances of the associated organ systems.

# BIO169 - Anatomy and Physiology II

## Overview

**Course Description**
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.

## Credit Hours
4

**Course Typically Offered**
Fall, Spring, Summer

## Requisites
**Simple Requisites**

**State prerequisite**
**Type**
Prerequisite

Take BIO-168

Take BIO-168(S11555);

## Student Learning Outcomes

**Objectives**
Identify the anatomical structures associated with the endocrine system, the cardiovascular system, the lymphatic system, the respiratory system, the digestive system, the urinary system, and the reproductive system.

**Objectives**
Apply in-depth knowledge of the physiology of the endocrine system, the cardiovascular system, the lymphatic system, the respiratory system, the digestive system, the urinary system, and the reproductive system.

**Objectives**
Analyze homeostatic imbalances of the associated organ systems.

**Objectives**
Outline the stages of human development and the continuity of life.

**Objectives**
Apply the interaction of organ systems to the maintenance of homeostasis.

# BIO175 - General Microbiology

## Overview
**Course Description**
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.

## Credit Hours
3

**Course Typically Offered**
Fall, Spring

## Requisites
**Simple Requisites**

**State prerequisite**
**Type**
Prerequisite

Take One: BIO-110, BIO-111, BIO-163, BIO-165, or BIO-168

Take BIO-110(S13284) BIO-111(S13307) BIO-163 BIO-165 or BIO-168(S11555);

## Student Learning Outcomes

**Objectives**
Discuss various scientists who have made important contributions to microbiology

**Objectives**
Compare and contrast the various microscopes and staining procedures used to visualize microbes including performing gram staining and isolating microbes for additional examination.

**Objectives**
Categorize the different types of microbes.

**Objectives**
Describe the dynamics of bacterial growth and metabolism and the application to controlling microbial growth.

**Objectives**
Demonstrate correct aseptic lab techniques.

**Objectives**
Assess the effects that microorganisms have on human health and mechanisms for controlling the disease process.

## BIO180 - Biological Chemistry

### Overview

**Course Description**
This course provides an introduction to basic biochemical processes in living systems. Topics include properties of carbohydrates, lipids, proteins, nucleic acids, vitamins, and buffers, with emphasis on biosynthesis, degradation, function, and equilibrium. Upon completion, students should be able to demonstrate an understanding of fundamental biochemical concepts.

### Credit Hours

3

### Student Learning Outcomes

**Objectives**
Draw and name organic molecules

**Objectives**
Describe the importance of biological chemistry to health professionals

**Objectives**
Describe the function and metabolism of macromolecules including carbohydrates, proteins/amino acids, lipids, and nucleic acids

**Objectives**
Describe the function and life-cycle of chemical messengers, neurotransmitters, and certain drugs

## BIO275 - Microbiology

### Overview

**Course Description**
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.

### Credit Hours

4

### Requisites

**Simple Requisites**

**State prerequisite**
**Type**
Prerequisite

Take One: BIO 111, BIO 163, BIO 165, or BIO 168

Take 1 group; # Take BIO-111(S13307); # Take BIO-163; # Take BIO-165; # Take BIO-168(S11555);

## BPM110 - Bioprocess Practices

### Overview

**Course Description**
This course provides a study of plant operations including various plant utility systems and detailed study of the varied plant environments in a bioprocessing facility. Emphasis is placed on quality mindset and principles of validation through applications of monitoring procedures. Upon completion, students should be able to demonstrate the rigors of industry regulation and its necessity.

### Credit Hours

5

**Course Typically Offered**
Fall, Spring

### Requisites

**Simple Requisites**

**Ptc-110**
**Type**
Corequisite

PTC-110

Take PTC-110;

### Student Learning Outcomes

**Objectives**
Demonstrate an understanding of quality systems such as International Standards Organization (ISO) and Current Good Manufacturing Practices (cGMP

**Objectives**
Measure length, volume, mass, and pressure using the metric system.

**Objectives**
Identify workplace safety hazards.

**Objectives**
Apply a quality mindset and validation principles to varied bioprocess operational environments

**Objectives**
Operate process equipment including an autoclave, incubator, microscope, balance, refractometer, pH meter, conductivity meter, and bioreactor.

**Objectives**
Work aseptically to minimize product contamination.

**Objectives**
Provide the optimal conditions for growing cells.

# BPM111 - Bioprocess Measurements

## Overview

**Course Description**
This course covers a variety of physical measurements. Emphasis is placed on pH, temperature, pressure and flow rates, as well as spectrophotometry, and biochemical and chemical analysis methods. Upon completion, students should be able to demonstrate and perform many aspects of process monitoring.

## Credit Hours

4

**Course Typically Offered**
Fall, Spring, Summer

## Requisites

**Simple Requisites**

**State prerequisite**
**Type**
Prerequisite

Take BPM-110

Take BPM-110(S20448);

## Student Learning Outcomes

**Objectives**
Identify physical, chemical, and biological process measurement components relevant to the biopharmaceutical industry.

**Objectives**
Apply the theories and principles of bioprocess measurements and instrumentation to control and adjust processes.

**Objectives**
Follow procedures to keep accurate and precise records.

**Objectives**
Record data from performing a variety of analytical methods

**Objectives**
Perform data analysis utilizing graphing software to organize data

**Objectives**
Prepare an organized lab report summarizing a laboratory experiment using the course laboratory report format.

# BPM112 - Upstream Processing

## Overview

**Course Description**
This course introduces techniques involved in cell growth and fractionation. Topics include fermentation theory and application, as well as cell harvesting, cell disruption and fractionation methods. Upon completion, students should be able to grow cells, as well as isolate and collect various fractions.

## Credit Hours

5

**Course Typically Offered**
Fall

## Requisites

**Simple Requisites**

**State prerequisite**
**Type**
Prerequisite

Take BPM-111

Take BPM-111(S20449);

## Student Learning Outcomes

**Objectives**
Identify upstream process components relevant to the biopharmaceutical industry.

**Objectives**
Apply theories and principles of upstream biomanufacturing to industry technologies.

**Objectives**
Demonstrate aseptic technique and sterilization procedures.

**Objectives**
Perform upstream processes like cell culture and media prep using standard operating procedures (SOPs)

**Objectives**
Generate presentation of scientific information from experimental data.

# BPM113 - Downstream Bioprocessing

## Overview

**Course Description**
This course introduces a variety of techniques involved in separation procedures. Topics include extraction and precipitation, concentration and molecular filtration methods, as well as different types of chromatography. Upon completion, students should be able to perform separation procedures with an understanding of industrial scale procedures.

## Credit Hours

4

**Course Typically Offered**
Spring

## Requisites

**Simple Requisites**

**State prerequisite**
**Type**
Prerequisite

Take BPM-111

Take BPM-111(S26129);

## Student Learning Outcomes

**Objectives**
Identify components of separations procedures used in downstream processing

**Objectives**
Explain different types of chromatography

**Objectives**
Perform separation procedures like chromatography, extraction, precipitation, concentration, and filtration

**Objectives**
Describe industrial scale downstream processing procedures

**Objectives**
Communicate applications and issues of downstream processing

# BPR111 - Print Reading

## Overview

**Course Description**
This course introduces the basic principles of print reading. Topics include line types, orthographic projections, dimensioning methods, and notes. Upon completion, students should be able to interpret basic prints and visualize the features of a part or system.

## Credit Hours

2

**Course Typically Offered**
Fall

## Student Learning Outcomes

**Objectives**
Identify types of lines

**Objectives**
Identify types of views

**Objectives**
Calculate measurements of features on prints

**Objectives**
Convert degrees to decimal degrees

**Objectives**
Identify sectional views

**Objectives**
Sketch simple prints

**Objectives**
Identify parts on an IPB (Illustrated Parts Breakdown)

**Objectives**
Relate Drawings Views to actual parts.

**Objectives**
Understand fractions, decimals and metric systems

**Objectives**
Use practical measuring tools

**Objectives**
Use layout and hand tools

**Objectives**
Understand various grinders

**Objectives**
Understand metal finishes

**Objectives**
Operate machines as Drill Presses, Saws, Lathes, and Milling Machines

## BPR121 - Blueprint Reading-Mechanical

### Overview

**Course Description**
This course covers the interpretation of intermediate blueprints. Topics include tolerancing, auxiliary views, sectional views, and assembly drawings. Upon completion, students should be able to read and interpret a mechanical working drawing.

### Credit Hours

2

**Course Typically Offered**
Spring

### Requisites

**Simple Requisites**

**State prerequisite**
**Type**
Prerequisite

Take One: BPR-111 or MAC-131

Take BPR-111(S13137) or MAC-131;

### Student Learning Outcomes

**Objectives**
Practice Safety

## BPR130 - Print Reading-Construction

### Overview

**Course Description**
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.

### Credit Hours

3

**Course Typically Offered**
Fall, Spring

### Student Learning Outcomes

**Objectives**
Demonstrate proficiency with an Architect and Engineer's scale.

**Objectives**
Interpret plan, elevation, and section views in Blueprints and Construction Drawings.

**Objectives**
Identify the vocabulary and parts of the built environment including site, foundation, framing, trades, interior and exterior finishes, and construction materials.

## BPT110 - Media Evolution

### Overview

**Course Description**
This course introduces media in the United States. Emphasis is placed on industry development, media ethics, governmental oversight, technological advancements, revenue models, and audience shifts and trends. Upon completion, students should be able to demonstrate knowledge of regulations, organizational structures, revenue sources, historical development, and on-going operation in media related industries.

### Credit Hours

3

**Course Typically Offered**
Fall

### Student Learning Outcomes

**Objectives**
Students will analyze concepts, historical events, and advancements in technology in the media industry based on a series of graded assignments and chapter tests.

## BPT111 - Broadcast Law & Ethics

### Overview

**Course Description**
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.

### Credit Hours

3

**Course Typically Offered**
Fall

## BPT112 - Media Writing

### Overview

**Course Description**
This course introduces the principles for writing for media. Emphasis is placed on understanding target audiences and demographics, while shaping the message to meet the specificity of the content platform. Upon completion, students should be able to understand and write copy and scripts according to standard industry formats.

### Credit Hours

4

**Course Typically Offered**
Fall

### Student Learning Outcomes

**Objectives**
Write copy and scripts according to standard industry formats

## BPT113 - Broadcast Sales

### Overview

**Course Description**
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.

### Credit Hours

3

**Course Typically Offered**
Fall

## BPT115 - Public Relations

### Overview

**Course Description**
This course introduces the art and science of analyzing trends, predicting their consequences, counseling organizations, and implementing actions to serve organizational and public interests. Emphasis is placed on identifying public needs, conducting and analyzing research, writing and communicating information, maintaining media relations, and creating an organizational crisis plan. Upon completion, students should be able to summarize public relations history, conduct research, develop press releases, create printed material, and formulate a crisis plan.

### Credit Hours

3

## BPT121 - Media Speech Techniques

### Overview

**Course Description**
This course covers basic preparation and speaking performance. Emphasis is placed on proper articulation, pronunciation, rate of delivery, pitch, breathing techniques, inflection, projection, and phrasing for media talent. Upon completion, students should be able demonstrate effective communication to a target audience.

### Credit Hours
3

**Course Typically Offered**
Fall

### Student Learning Outcomes

**Objectives**
Demonstrate effective communication to a target audience.

## BPT122 - Broadcast Speech II

### Overview
**Course Description**
This course covers basic and advanced preparation and performance of on-air speech. Emphasis is placed on enhancing a pleasant, effective voice with techniques applied to impromptu speaking, radio plays, and taped presentations. Upon completion, students should be able to employ proper articulation, pronunciation, rate of delivery, phrasing, and other voice techniques in a professional manner.

### Credit Hours
3

### Requisites
**Simple Requisites**

**State prerequisite**
**Type**
Prerequisite

Take BPT-121

Take BPT-121(S13717);

## BPT131 - Audio Production I

### Overview
**Course Description**
This course covers the creation, development, production, and presentation of audio programming elements for various formats and platforms. Emphasis is placed on the operation of professional audio equipment, microphones, and recording devices. Upon completion, students should be able to correctly operate audio recording and playback equipment and demonstrate an understanding of the basic components of sound.

### Credit Hours
4

**Course Typically Offered**
Fall

### Student Learning Outcomes

**Objectives**
Operate audio recording and playback equipment

**Objectives**
Demonstrate an understanding of the basic components of sound

## BPT132 - Audio Production II

### Overview
**Course Description**
This course is designed to advance the skills learned in BPT 131 Audio Production I and covers creation, development, production, and presentation of audio programming elements for various formats and platforms. Emphasis is placed on the operation of professional audio equipment, microphones, and recording devices. Upon completion, students should be able to correctly operate audio recording and playback equipment and demonstrate an understanding of the basic components of sound.

### Credit Hours
4

**Course Typically Offered**
Spring

### Requisites
**Simple Requisites**

**State prerequisite**
**Type**
Prerequisite

Take BPT-131

Take BPT-131(S26034);

### Student Learning Outcomes

**Objectives**
Operate audio recording and playback equipment

# BPT135 - Audio Performance I

## Overview

**Course Description**
This course the basics for audio performance and audio content creation. Emphasis is placed on diction, scripting, recording, ad-libbing, microphone techniques, articulation, pronunciation, and presentation of audio broadcasting elements for broadcast and/or other electronic media applications. Upon completion, students should be able to demonstrate competency in audio communications.

## Credit Hours

2

**Course Typically Offered**
Fall

## Student Learning Outcomes

**Objectives**
Demonstrate competency in audio communications

# BPT135A - Radio Performance I

## Overview

**Course Description**
This course provides an opportunity to operate the college radio station as an announcer/board operator. Emphasis is placed on operating control-room equipment, logging transmitter readings, EBS tests, reading news, and broadcasting free of interruptions. Upon completion, students should be able to prepare music, public service announcements, and promos for timely broadcast; introduce songs/programs smoothly; and follow FCC rules.

## Credit Hours

1

**Course Typically Offered**
Fall

# BPT135B - Radio Performance I

## Overview

**Course Description**
This course provides an opportunity to operate the college radio station as an announcer/board operator. Emphasis is placed on operating control-room equipment, logging transmitter readings, EBS tests, reading news, and broadcasting free of interruptions. Upon completion, students should be able to prepare music, public service announcements, and promos for timely broadcast; introduce songs/programs smoothly; and follow FCC rules.

## Credit Hours

1

**Course Typically Offered**
Spring

## Requisites

**Simple Requisites**

**Prerequisite**
**Type**
Prerequisite

None Take BPT-135A;

Take BPT-135A;

# BPT136 - Audio Performance II

## Overview

**Course Description**
This course is designed to advance skills learned in BPT 135 Audio Performance I and focuses on audio performance and audio content creation. Emphasis is placed on diction, scripting, recording, ad-libbing, microphone techniques, articulation, pronunciation, and presentation of audio broadcasting elements for broadcast and/or other electronic media applications. Upon completion, students should be able to demonstrate competency in audio communications.

## Credit Hours

2

**Course Typically Offered**
Spring

## Requisites

**Simple Requisites**

**State prerequisite**
**Type**
Prerequisite

Take BPT-135

Take BPT-135(S26036);

## Student Learning Outcomes

**Objectives**
Demonstrate competency in audio communications

# BPT215 - Industry Career Preparation

## Overview

**Course Description**
This course covers employment trends and job descriptions in media, research, resume development, industry best practices for showcasing competencies in technical skills, and interviewing skills. Emphasis is placed on preparing students for employment in various jobs in media.Upon completion, students should be able to research, analyze, and identify employment opportunties in industry that match skills mastered in the Audio and Video Production Technology Program.

## Credit Hours

3

**Course Typically Offered**
Fall

### Student Learning Outcomes

**Objectives**
Research, analyze, and identify employment opportunities in industry that match skills mastered in Audio and Video Production Technology.

## BPT220 - Emerging Technologies

### Overview

**Course Description**
This course introduces advancements in technology, equipment, and/or software in the industry. Emphasis is placed on new and emerging content production trends in the audio and video industry. Upon completion, students should be able to adapt and utilize the most current audio and video technology.

### Credit Hours

4

**Course Typically Offered**
Spring

### Student Learning Outcomes

**Objectives**
Adapt and utilize the most current audio and video technology.

## BPT231 - Video Production I

### Overview

**Course Description**
This course is designed to develop technical abilities and a creative eye for producing effective videos. Emphasis is placed on fundamental techniques and aesthetics of planning, shooting, lighting, sound design, and editing. Upon completion, students should be able to create professional video productions in a team environment.

### Credit Hours

4

**Course Typically Offered**
Fall

### Student Learning Outcomes

**Objectives**
Create professional video productions in a team environment

## BPT232 - Video Production II

### Overview

**Course Description**
This course is designed to advance the study of video production learned in BPT 231 Video Production I and is designed to develop technical abilities and a creative eye for producing effective videos. Emphasis is placed on fundamental techniques and aesthetics of planning, shooting, lighting, sound design, and editing. Upon completion, students should be able to create professional video productions in a team environment.

### Credit Hours

4

**Course Typically Offered**
Spring

### Requisites

**Simple Requisites**

**State prerequisite**
**Type**
Prerequisite

Take BPT-231

Take BPT-231(S26045);

### Student Learning Outcomes

**Objectives**
Create professional video productions in a team environment.

## BPT235 - Video Performance I

### Overview

**Course Description**
This course provides hands-on experience in the operation of video equipment. Emphasis is placed on the application of skills through direct participation in the production or distribution of video. Upon completion, students should be able to demonstrate competence in creating video content.

### Credit Hours

2

### Student Learning Outcomes

**Objectives**
Demonstrate competence in creating video content.

## BPT235AB - Video Performance I

### Overview

**Course Description**
This course provides hands-on experience in the operation of video equipment. Emphasis is placed on the application of skills through direct participation in the production or distribution of video. Upon completion, students should be able to demonstrate competence in creating video content.

### Credit Hours
1

**Course Typically Offered**
Fall

## BPT235BB - Video Performance I

### Overview
**Course Description**
This course provides hands-on experience in the operation of video equipment. Emphasis is placed on the application of skills through direct participation in the production or distribution of video. Upon completion, students should be able to demonstrate competence in creating video content.

### Credit Hours
1

**Course Typically Offered**
Spring

### Requisites
**Simple Requisites**

**Required concurrent or previous courses**
**Type**
Corequisite

Take BPT-235AB

Take BPT-235AB;

## BPT236 - Video Performance II

### Overview
**Course Description**
This course is designed to advance the skills learned in BPT 235 Video Performance I and provides hands-on experience in the operation of video equipment. Emphasis is placed on the application of skills through direct participation in the production or distribution of video. Upon completion, students should be able to demonstrate competence in creating video content.

### Credit Hours
2

**Course Typically Offered**
Summer

### Requisites
**Simple Requisites**

**State prerequisite**
**Type**
Prerequisite

Take BPT-235

Take BPT-235(S26047);

### Student Learning Outcomes

**Objectives**
Demonstrate competence in creating video content

## BPT250 - Corporate Video

### Overview
**Course Description**
This course covers planning and video production for businesses, education, or corporate clients. Emphasis is placed on meeting the defined goal of the client, including interviewing, research, location scouting, script review, field production and post-production. Upon completion, students should be able to plan, write, shoot, and edit an a corporate video.

### Credit Hours
3

**Course Typically Offered**
Spring

### Requisites
**Simple Requisites**

**Local Prerequisite**
**Type**
Prerequisite

Take BPT-231

Take BPT-231(S26045);

### Student Learning Outcomes

**Objectives**
Plan, write, shoot, and edit an institutional video.

## BPT285 - Broadcast Production Capstone

### Overview
**Course Description**
This course provides an opportunity to complete a media project from the design phase through implementation with minimal instructor guidance. Emphasis is placed on analyzing, planning, production, post-production, delivery, and evaluation. Upon completion, students should be able to plan, produce and deliver a media project.

### Credit Hours
3

**Course Typically Offered**
Spring

### Requisites
**Simple Requisites**

**State prerequisite**
**Type**
Prerequisite

Take One: BPT-132 or BPT-232

Take BPT-132(S26035) or BPT-232(S26046);

### Student Learning Outcomes

**Objectives**
Plan, produce and deliver a media project.

## BTC3300 - Aseptic Manufacturing

### Overview
**Course Description**
This course will focus on the basics of Clean Room operations. Students will learn the fundamentals and principles associated with parenteral products as it relates to aseptic processing. Topics may include basic microbiology, clean room design and control, environmental monitoring, glassware and equipment preparation, solution processing (compounding), and filtration. Upon completion, students will understand and have hands-on experience with various pre-manufacturing activities.

### Credit Hours
0

## BUS110 - Introduction to Business

### Overview
**Course Description**
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.

### Credit Hours
3

**Course Typically Offered**
Fall, Spring, Summer

### Student Learning Outcomes

**Objectives**
Identify various forms of business organizations.

**Objectives**
Define business vocabulary.

**Objectives**
Describe the basics of business ethics.

**Objectives**
Explain basic management principles.

## BUS115 - Business Law I

### Overview
**Course Description**
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.

### Credit Hours
3

**Course Typically Offered**
Fall, Spring, Summer

### Student Learning Outcomes

**Objectives**
Discuss the origins and history of law

**Objectives**
Explain constitutional law

**Objectives**
To become familiar with the federal and state court systems

**Objectives**
Demonstrate a basic knowledge of criminal law and tort law

**Objectives**
Explain the requirements of an enforceable contract

**Objectives**
Draft a simple contract

**Objectives**
Demonstrate a working knowledge as to what constitutes a breach of contract and defenses to breach of contract

**Objectives**
Identify all conduct, including performance, that constitutes duties under a contract

**Objectives**
Explain the differences that arise when a contract comes under the sales provisions of the UCC

**Objectives**
Identify the elements of a contract.

**Objectives**
Describe the structure of the U.S. court system.

**Objectives**
Identify laws, conditions and regulations in national and international work environments.

# BUS116 - Business Law II

## Overview

**Course Description**
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.

## Credit Hours

3

## Requisites

**Simple Requisites**

**State prerequisite**
**Type**
Prerequisite

Take BUS-115

Take BUS-115(S24153);

# BUS125 - Personal Finance

## Overview

**Course Description**
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.

## Credit Hours

3

**Course Typically Offered**
Fall, Spring

## Student Learning Outcomes

**Objectives**
Demonstrate an understanding of the components of an individual's personal finances

**Objectives**
Identify the appropriate sources of information needed to complete a personal budget

**Objectives**
Calculate car loan and mortgage payments

**Objectives**
Research techniques to prepare for retirement

**Objectives**
Develop a plan to prepare for unplanned expenses

**Objectives**
Evaluate current interest rates as they relate to financial investments and savings for personal wealth

**Objectives**
Discuss the components of credit and how to utilize it responsibly

**Objectives**
Develop and design a personal budget plan that will include evaluating income, savings, and future financial needs

## BUS137 - Principles of Management

### Overview

**Course Description**
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.

### Credit Hours

3

**Course Typically Offered**
Fall, Spring, Summer

### Student Learning Outcomes

**Objectives**
Explain strategic management in business operations.

**Objectives**
Define management, quality management, and project management.

**Objectives**
Identify relevant issues in human resource management.

**Objectives**
Discuss the basics of the management in business

**Objectives**
Explain the four management functions within an organization

**Objectives**
Demonstrate a variety of management techniques in real-world situations

## BUS151 - People Skills

### Overview

**Course Description**
This course introduces the basic concepts of identity and communication in the business setting. Topics include self-concept, values, communication styles, feelings and emotions, roles versus relationships, and basic assertiveness, listening, and conflict resolution. Upon completion, students should be able to distinguish between unhealthy, self-destructive, communication patterns and healthy, non-destructive, positive communication patterns.

### Credit Hours

3

**Course Typically Offered**
Fall, Spring

### Student Learning Outcomes

**Objectives**
Distinguish between unhealthy, self-destructive, communication patterns and healthy, non-destructive, positive communication patterns.

**Objectives**
Develop and implement strategies for strong interpersonal skills with colleagues and others for implementation in the workplace and business arena.

**Objectives**
Demonstrate communication skills and habits to implement in real world scenarios to foster success between individuals in a business environment.

## BUS153 - Human Resource Management

### Overview

**Course Description**
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.

### Credit Hours
3

**Course Typically Offered**
Fall, Spring, Summer

### Student Learning Outcomes

**Objectives**
Discuss and apply various employment laws.

**Objectives**
Discuss the reasons leading to the development of organizational policies and procedures

**Objectives**
To be able to analyze and evaluate current workplace situations

**Objectives**
Demonstrate the critical thinking process through application based activities

## BUS217 - Employment Law and Regulations

### Overview

**Course Description**
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.

### Credit Hours
3

**Course Typically Offered**
Spring

### Student Learning Outcomes

**Objectives**
Define fair employment practices, EEO, affirmative action.

**Objectives**
Identify employee rights and protections.

**Objectives**
Evaluate organization policy for compliance.

**Objectives**
Evaluate decisions to assure they are not contrary to law.

**Objectives**
Demonstrate knowledge and cite various employment laws

**Objectives**
Explain the background and reasons leading to the enactment of various employment laws

**Objectives**
Evaluate and apply case law to current workplace situations

**Objectives**
Perform legal research to faciltate application of employment law

**Objectives**
Demonstrate skill and clarity in writing

**Objectives**
Practice hard skills to include critical thinking, problem solving, decision making, and sound judgement

## BUS225 - Business Finance

### Overview

**Course Description**
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.

### Credit Hours
3

**Course Typically Offered**
Fall, Spring

### Student Learning Outcomes

**Objectives**
Interpret and apply the principles of financial management.

## BUS228 - Business Statistics

### Overview

**Course Description**
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.

### Credit Hours

3

## BUS230 - Small Business Management

### Overview

**Course Description**
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.

### Credit Hours

3

## BUS234 - Training and Development

### Overview

**Course Description**
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.

### Credit Hours

3

**Course Typically Offered**
Fall

### Student Learning Outcomes

**Objectives**
Design, conduct, and evaluate a training program.

**Objectives**
Define the steps for conducting a needs assessment.

**Objectives**
Identify instructional approaches.

**Objectives**
Design a learning environment.

**Objectives**
Compare and contrast training with education, development, and consulting.

**Objectives**
Identify at least five characteristics of adult learning.

**Objectives**
Describe the steps involved in producing communication training programs.

**Objectives**
Conduct a needs analysis.

**Objectives**
Write a clear learning objective for adult learners.

**Objectives**
Identify two advantages and two disadvantages of various training methods.

**Objectives**
Use appropriate visual aids to enhance training.

**Objectives**
Produce a trainer guide for two contact hours of communication training.

**Objectives**
Explain three methods for managing or reducing conflict in the training classroom.

**Objectives**
Identify at least three advantages and disadvantages of various types of assessment instruments.

**Objectives**
Model appropriate training techniques in a training presentation. 12. Design, conduct, and evaluate a training program.

**Objectives**
Define the steps for conducting a needs assessment.

**Objectives**
Identify instructional approaches.

**Objectives**
Design a learning environment.

# BUS240 - Business Ethics

## Overview

**Course Description**
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.

## Credit Hours

3

**Course Typically Offered**
Fall, Spring, Summer

## Student Learning Outcomes

**Objectives**
Identify an organization's stakeholders

**Objectives**
Define the basic ethical theories that inform ethical decision making in business

**Objectives**
Recognize an ethical dilemma in the workplace

**Objectives**
Propose a resolution for an ethic dilemma in a workplace

# BUS252 - Labor Relations

## Overview

**Course Description**
This course covers the history of the organized labor movement and the contractual relationship between corporate management and employees represented by a union. Topics include labor laws and unfair labor practices, the role of the NLRB, organizational campaigns, certification/decertification elections, and grievance procedures. Upon completion, students should be able to act in a proactive and collaborative manner in an environment where union representation exists.

## Credit Hours

3

**Course Typically Offered**
Spring

## Student Learning Outcomes

**Objectives**
Discuss collective bargaining

**Objectives**
Discuss labor relations issues in the public and private sectors

**Objectives**
Explain the provisions of the National Labor Relations Act and other labor laws

**Objectives**
Discuss the methods/labor relations practices used in other countries as compared and contrasted with those in the United States

**Objectives**
Explain the causes and solutions to the challenges unions face in representing workers

**Objectives**
Discuss what is considered to be unfair labor practices

**Objectives**
Discuss how international labor relations are developing

## BUS255 - Organizational Behavior in Business

### Overview

**Course Description**
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.

### Credit Hours

3

## BUS256 - Recruiting, Selection, & Personnel Planning

### Overview

**Course Description**
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.

### Credit Hours

3

**Course Typically Offered**
Fall

### Student Learning Outcomes

**Objectives**
Identify recruiting, interviewing and screening techniques.

**Objectives**
Describe processes to acquire and retain employees who match position requirement and fulfill organizational objectives.

**Objectives**
Describe personnel planning.

**Objectives**
Identify procedures for maintaining employee records.

**Objectives**
Develop a staffing strategy that reinforce business strategy

**Objectives**
Forecast talent needs and labor supply and plan accordingly

**Objectives**
Conduct a job or competency analysis and a job rewards analysis

**Objectives**
Strategically source potential recruits

**Objectives**
Recruit and select the right people

**Objectives**
Negotiate and hire top candidates

**Objectives**
Socialize, deploy, and retain talent

**Objectives**
Leverage technology throughout the staffing system

**Objectives**
Ensure legal compliance of the staffing system

# BUS258 - Compensation and Benefits

## Overview

**Course Description**
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.

## Credit Hours

3

**Course Typically Offered**
Fall

## Student Learning Outcomes

**Objectives**
Describe job analysis and job evaluation techniques.

**Objectives**
Describe benefits and pay-for-performance programs.

**Objectives**
Develop and manage a basic compensation system to attract, motivate, and retain employees.

**Objectives**
Define wage and salary surveys.

**Objectives**
Analyze different types of pay plans and benefit options.

**Objectives**
Make cost benefit calculations.

**Objectives**
Explain job evaluation, pay range and pay grade decision.

**Objectives**
Demonstrate effective writing techniques: clarity, correct grammar usage, word choice, and tone.

# BUS259 - Human Resource Management Applications

## Overview

**Course Description**
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.

## Credit Hours

3

**Course Typically Offered**
Fall, Spring, Summer

## Requisites

**Simple Requisites**

**State prerequisite**
**Type**
Prerequisite

Take: BUS-217 or BUS-234

Take BUS-217(S24154) or BUS-234(S24155);

## Student Learning Outcomes

**Objectives**
Apply day-to-day HRM functions to exercises and simulations.

**Objectives**
Determine the appropriate actions called for by typical events that affect the status of people at work.

**Objectives**
Apply day-to-day HRM functions to exercises and simulations.

**Objectives**
Determine the appropriate actions called for by typical events that affect the status of people at work. 3. Determine the appropriate actions called for by typical events that affect the status of people at work

**Objectives**
Identify personal and family issues that affect employees at work and develop some background in how to deal with them

**Objectives**
Discuss the legal and moral aspects of discrimination and sexual harassment and strategies to use in situations of discrimination or sexual harassment.

**Objectives**
Define job performance, performance standards, and performance measurement and be able to effectively handle these activities

**Objectives**
Explain general guidelines for effective recruitment, selection, and training and career development

**Objectives**
Discuss the function of compensation, benefits, safety and health policies and procedures

**Objectives**
Describe how to handle motivation, discipline, layoffs, demotions and firings

**Objectives**
Demonstrate technique in the areas of labor relations and collective bargaining

**Objectives**
Compare cross-culture management differences, individual characteristics, and values and describe how individuals and organizations can improve their effectiveness in global settings

# BUS260 - Business Communication

## Overview

**Course Description**
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.

## Credit Hours

3

**Course Typically Offered**
Fall, Spring, Summer

## Requisites

**Simple Requisites**

**State prerequisite**
**Type**
Prerequisite

Take One: ENG-110 or ENG-111

Take ENG-110(S24002) or ENG-111(S24022);

## Student Learning Outcomes

**Objectives**
Communicate effectively in the workplace using a variety of written communication tools.

**Objectives**
Compose workplace emails and memorandums using either a deductive or inductive approach depending on the situation.

**Objectives**
Compose a persuasive email and memorandum using an inductive approach as outlined in the AIDA template.

**Objectives**
Describe the types of communication flows within an organization.

# BUS261 - Diversity in Management

## Overview

**Course Description**
This course is designed to help managers recognize the need to incorporate diversity into all phases of organizational management. Topics include self-evaluation, management, sexual harassment, workforce diversity, dual careers,

role conflict, and communication issues. Upon completion, students should be able to implement solutions that minimize policies, attitudes, and stereotypical behaviors that block effective team building.

### Credit Hours
3

**Course Typically Offered**
Spring

### Student Learning Outcomes

**Objectives**
Demonstrate knowledge of NC Child Care Law and Rules.

**Objectives**
Examine comprehensive program policies.

**Objectives**
Evaluate basic components of a business plan and program budget.

## BUS270 - Professional Development

### Overview

**Course Description**
This course provides basic knowledge of self-improvement techniques as related to success in the professional world. Topics include positive human relations, job-seeking skills, and projecting positive self-image. Upon completion, students should be able to demonstrate competent personal and professional skills necessary to get and keep a job.

### Credit Hours
3

**Course Typically Offered**
Spring

### Student Learning Outcomes

**Objectives**
To demonstrate resume writing and job interview skills

**Objectives**
To categorize etiquette skills by telephone, business and social skills

**Objectives**
To evaluate their current wardrobe for interview appropriateness

**Objectives**
To write short and long term goals for employment

## BUS280 - REAL Small Business

### Overview

**Course Description**
This course introduces hands-on techniques and procedures for planning and opening a small business, including the personal qualities needed for entrepreneurship. Emphasis is placed on market research, finance, time management, and day-to-day activities of owning/operating a small business. Upon completion, students should be able to write and implement a viable business plan and seek funding.

### Credit Hours
4

**Course Typically Offered**
Fall, Spring

### Student Learning Outcomes

**Objectives**
Create a finacial plan for a small business.

**Objectives**
To categorize business expenses into fixed and variable costs

**Objectives**
To evaluate their business idea for feasibility

**Objectives**
To write a comprehensive business plan

## CAR111 - Carpentry I

### Overview

**Course Description**
This course introduces the theory and construction methods associated with the building industry, including framing, materials, tools, and equipment. Topics include safety, hand/power tool use, site preparation, measurement and layout, footings and foundations, construction framing, and other related topics. Upon completion, students should be able to safely lay out and perform basic framing skills with supervision.

### Credit Hours
8

**Course Typically Offered**
Fall, Spring

### Student Learning Outcomes

**Objectives**
Students will understand and be able to demonstrate the safe and proper use of both hand tools and power tools.

**Objectives**
Students will understand all aspects of construction blueprints pertaining to the framing process for the floor systems interpretation through construction of floor system.

## CAR112 - Carpentry II

### Overview

**Course Description**
This course covers the advanced theory and construction methods associated with the building industry including framing and exterior finishes. Topics include safety, hand/power tool use, measurement and layout, construction framing, exterior trim and finish, and other related topics. Upon completion, students should be able to safely frame and apply exterior finishes to a residential building with supervision.

### Credit Hours

8

**Course Typically Offered**
Spring

### Requisites

**Simple Requisites**

**State prerequisite**
**Type**
Prerequisite

Take CAR-111

Take CAR-111(S16248);

### Student Learning Outcomes

**Objectives**
Student will be able to understand and demonstrate the ability to design, layout, and construct various wall systems.

**Objectives**
Student will be able to understand and demonstrate the ability to design, layout and construct various roofing systems according to code in regard to span.

**Objectives**
Student will be able to recognize and apply different types of roof sheathing.

## CAR113 - Carpentry III

### Overview

**Course Description**
This course covers interior trim and finishes. Topics include safety, hand/power tool use, measurement and layout, specialty framing, interior trim and finishes, cabinetry, and other related topics. Upon completion, students should be able to safely install various interior trim and finishes in a residential building with supervision.

### Credit Hours

6

**Course Typically Offered**
Spring

### Requisites

**Simple Requisites**

**State prerequisite**
**Type**
Prerequisite

Take CAR-111

Take CAR-111(S10358);

## CAR114 - Residential Building Codes

### Overview

**Course Description**
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.

### Credit Hours

3

**Course Typically Offered**
Fall, Spring

# CAR115 - Residential Planning/Estimating

## Overview

**Course Description**
This course covers project planning, management, and estimating for residential or light commercial buildings. Topics include planning and scheduling, interpretation of working drawings and specifications, estimating practices, and other related topics. Upon completion, students should be able to perform quantity take-offs and cost estimates.

## Credit Hours

3

**Course Typically Offered**
Fall, Spring

## Requisites

**Simple Requisites**

**State prerequisite**
**Type**
Prerequisite

Take BPR-130

Take BPR-130(S11505);

# CET225 - Digital Signal Processing

## Overview

**Course Description**
This course introduces concepts and applications of digital signal processing. Topics include Fourier analysis, signal sampling, digital filtering, IIR filters, FIR filters, and DSP programming. Upon completion, students should be able to implement and troubleshoot DSP systems in hardware and software.

## Credit Hours

3

**Course Typically Offered**
Fall

## Student Learning Outcomes

**Objectives**
Identify the components of a DSP system

**Objectives**
Explain the processes of recording, playback, and synthesis of digital music.

**Objectives**
Apply knowledge of the role of sampling and digitization in DSP systems through problem analysis and lab assignments

**Objectives**
Apply knowledge of the effects of sampling rate in a DSP system through problem analysis and lab assignments

**Objectives**
Apply knowledge of the function of compression in DSP systems through problem analysis and lab assignments

**Objectives**
Write source code in a graphics-based language to create DSP filtering systems

**Objectives**
Apply knowledge of DSP principles in written lab reports and exam questions

# CHI111 - Elementary Chinese I

## Overview

**Course Description**
This course introduces the fundamental elements of the Chinese 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 Chinese and demonstrate cultural awareness.

## Credit Hours

3

# CHI112 - Elementary Chinese II

## Overview

**Course Description**
This course includes the basic fundamentals of the Chinese language within a cultural context of the Chinese people and its history. 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 Chinese and demonstrate further cultural awareness.

## Credit Hours

3

### Requisites

**Simple Requisites**

**State prerequisite**
**Type**
Prerequisite

Take CHI-111

Take CHI-111;

## CHI211 - Intermediate Chinese I

### Overview

**Course Description**
This course includes communicative competencies in speaking, listening comprehension, reading, and writing at an intermediate level with attention to cultural awareness. Emphasis is placed on intermediate skills in speaking, reading, writing, and comprehension of spoken language. Upon completion, students should demonstrate simple conversations and distinguish an appropriate range of Chinese characters, as well as read simple expressions in modern standard Chinese.

### Credit Hours

3

### Requisites

**Simple Requisites**

**State prerequisite**
**Type**
Prerequisite

Take CHI-112

Take CHI-112;

## CHI212 - Intermediate Chinese II

### Overview

**Course Description**
This course provides continuation of communicative competence in speaking, listening comprehension, reading and writing at an intermediate level with attention to cultural awareness. Emphasis is placed on intermediate skills in speaking, reading, writing, and comprehension of spoken language. Upon completion, students should demonstrate simple conversations and distinguish a broad range of Chinese characters, as well as read expressions in modern standard Chinese.

### Credit Hours

3

### Requisites

**Simple Requisites**

**State prerequisite**
**Type**
Prerequisite

Take CHI-211

Take CHI-211;

## CHM092 - Fundamentals of Chemistry

### Overview

**Course Description**
This course covers fundamentals of chemistry with laboratory applications. 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 and demonstrate basic laboratory skills necessary for success in college-level science courses.

### Credit Hours

4

## CHM130 - General, Organic, & Biochemistry

### Overview

**Course Description**
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.

### Credit Hours

3

**Course Typically Offered**
Fall, Spring, Summer

### Requisites

**Simple Requisites**

**Required concurrent or previous courses**
**Type**
Corequisite

Take CHM-130A

Take CHM-130A;

### Student Learning Outcomes

**Objectives**
Utilize scientific measurements through choosing appropriate tools in the laboratory, employing the appropriate significant figures in measurements and calculations, using appropriate metric units, and solving problems using formulas and/or dimensional analysis.

**Objectives**
Describe subatomic particles and atomic structure, relating atomic structure to periodic properties.

**Objectives**
Differentiate between compounds with ionic and/or covalent bonding, explain the rules governing bonding, and relate bond polarity to macroscopic properties.

**Objectives**
Utilize the mole concept to interpret and classify chemical reactions and perform stoichiometric calculations.

**Objectives**
Apply the laws of conservation of matter and energy to everyday situations.

**Objectives**
Identify functional groups in organic compounds, name basic organic molecules, and predict the products of selected reactions.

**Objectives**
Describe the structure and function of select biologically significant compounds.

# CHM130A - General, Organic, & Biochemistry Lab

## Overview

**Course Description**
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.

## Credit Hours

1

**Course Typically Offered**
Fall, Spring, Summer

## Requisites

**Simple Requisites**

**State concurrent or previous courses**

**Type**
Corequisite

Take CHM-130

Take CHM-130;

## Student Learning Outcomes

**Objectives**
Utilize basic laboratory procedures and apply them to the principles presented in CHM 130.

**Objectives**
Demonstrate an understanding of laboratory safety and be able to work safely in the chemistry laboratory.

**Objectives**
Demonstrate the proper use of measuring tools and perform measurement conversions.

**Objectives**
Recognize commonly used laboratory equipment and supplies and be able to use them appropriately.

**Objectives**
Perform lab experiments, collect data, make observations and perform calculations associated with laboratory concepts.

**Objectives**
Write clearly and concisely in reporting and analyzing laboratory work and answering questions related to laboratory work.

# CHM131 - Introduction to Chemistry

## Overview

**Course Description**
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.

## Credit Hours

3

**Course Typically Offered**
Fall

## Requisites

**Simple Requisites**

**Required concurrent or previous courses**
**Type**
Corequisite

Take CHM-131A

Take CHM-131A;

## Student Learning Outcomes

**Objectives**
Utilize scientific measurements through choosing appropriate tools in the laboratory, employing the appropriate significant figures in measurements and calculations, using appropriate metric units, and solving problems using formulas and/or dimensional analysis.

**Objectives**
Describe subatomic particles and atomic structure, relating atomic structure to periodic properties.

**Objectives**
Differentiate between compounds with ionic and/or covalent bonding, explain the rules governing bonding, and relate bond and molecule polarity to macroscopic properties.

**Objectives**
Balance chemical equations, predict the products of selected reactions, utilize the mole concept to interpret and classify chemical reactions, and perform stoichiometric calculations.

**Objectives**
Apply the laws of conservation of matter and energy to everyday situations.

**Course Description**
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.

## Credit Hours

1

**Course Typically Offered**
Fall

## Requisites

**Simple Requisites**

**State concurrent or previous courses**
**Type**
Corequisite

Take CHM-131

Take CHM-131;

## Student Learning Outcomes

**Objectives**
Utilize basic laboratory procedures and apply them to the principles presented in CHM 131.

**Objectives**
Demonstrate an understanding of laboratory safety and be able to work safely in the chemistry laboratory.

**Objectives**
Demonstrate the proper use of measuring tools and perform measurement conversions.

**Objectives**
Recognize commonly used laboratory equipment and supplies and be able to use them appropriately.

**Objectives**
Perform lab experiments, collect data, make observations and perform calculations associated with laboratory concepts.

# CHM131A - Introduction to Chemistry Lab

## Overview

**Objectives**
Write clearly and concisely in reporting and analyzing laboratory work and answering questions related to laboratory work.

## CHM132 - Organic and Biochemistry

### Overview

**Course Description**
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.

### Credit Hours

4

### Requisites

**Simple Requisites**

**State prerequisite**
**Type**
Prerequisite

Take one set: Set 1: CHM-131 and CHM-131A Set 2: CHM-151

Take 1 group; # Take CHM-131 CHM-131A; # Take CHM-151;

## CHM151 - General Chemistry I

### Overview

**Course Description**
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.

### Credit Hours

4

**Course Typically Offered**
Fall, Spring, Summer

### Requisites

**Simple Requisites**

**Local Prerequisite**
**Type**
Corequisite

Take MAT-045P

Take 1 group; # Take DMA-060(S24128) DMA-070(S24129) DMA-080(S24130); # Take DMA-060(S23172) DMA-070(S23173) DMA-080(S23174); # Take MAT-080; # Take MAT-071(S25141); # Take MAT-003; From rule RMINP3; # Take MAT-121(S24993); # Take MAT-161(S20916); # Take DMA-010 DMA-020 DMA-030 DMA-040(S23170) DMA-050(S23171) DMA-065(S24074); # Take MAT-060 MAT-070 MAT-080; # Take MAT-060 MAT-070 MAT-090; # Take MAT-095; # Take MAT-045P;

### Student Learning Outcomes

**Objectives**
Utilize scientific measurements through choosing appropriate tools in the laboratory, employing the appropriate significant figures in measurements and calculations, using appropriate metric units, and solving problems using formulas and/or dimensional analysis.

**Objectives**
Describe subatomic particles and atomic structure using the nuclear and quantum mechanical models and relate atomic structure to periodic properties.

**Objectives**
Differentiate between compounds with ionic and/or covalent bonding, construct Lewis structures for molecules, identify molecular shapes using VSEPR theory, and determine molecular polarity.

**Objectives**
Utilize the mole concept to interpret and classify chemical reactions and perform stoichiometric calculations.

**Objectives**
Identify systems and their surroundings, make use of the laws of conservation of matter and energy, and apply these concepts to enthalpy calculations.

**Objectives**
Apply the kinetic-molecular theory and simple gas laws to calculate properties of ideal gas samples.

## CHM152 - General Chemistry II

### Overview

**Course Description**
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.

## Credit Hours
4

**Course Typically Offered**
Fall, Spring, Summer

## Requisites
**Simple Requisites**

**State prerequisite**
**Type**
Prerequisite

Take CHM-151

Take CHM-151;

## Student Learning Outcomes

**Objectives**
Apply mathematical skills to perform chemical calculations.

**Objectives**
Identify and explain intermolecular forces found in chemical substances.

**Objectives**
Identify factors affecting rates of reaction and perform calculations related to chemical kinetics.

**Objectives**
Describe chemical equilibrium and use equilibrium expressions to predict chemical concentrations.

**Objectives**
Identify and describe acids, bases, and buffer systems; perform calculations involving pH, pOH, and pK.

**Objectives**
Describe thermodynamic concepts relating entropy, free energy, and spontaneity and perform calculations related to these concepts.

**Objectives**
Discuss the operations of electrochemical cells and perform related calculations.

# CHM251 - Organic Chemistry I

## Overview
**Course Description**
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.

## Credit Hours
4

## Requisites
**Simple Requisites**

**State prerequisite**
**Type**
Prerequisite

Take CHM-152

Take CHM-152;

## Student Learning Outcomes

**Objectives**
Discuss the fundamental concepts of covered organic topics as needed in CHM 252.

**Objectives**
Recognize, identify, and draw common organic functional groups and describe their properties.

**Objectives**
Name simple organic molecules in accordance with IUPAC and common naming conventions.

**Objectives**
Identify, draw and explain common reactions of alkenes and alkynes.

**Objectives**
Draw and predict the reactions and reaction mechanisms for substitution and elimination reactions of organic compounds.

**Objectives**
Explain the concepts of isomerization and stereochemistry.

**Objectives**
Explain, in writing organic concepts presented in the lecture and/or lab.

## CHM252 - Organic Chemistry II

### Overview

**Course Description**
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.

### Credit Hours

4

### Requisites

**Simple Requisites**

**State prerequisite**
**Type**
Prerequisite

Take CHM-251

Take CHM-251;

### Student Learning Outcomes

**Objectives**
For aromatic molecules, alcohols, ethers, aldehydes, ketones, carboxylic acids and derivatives, amines and heterocyclics, be able to a) name them, in accordance with IUPAC and common naming conventions b) draw their structures c) identify their properties d) write their common reactions and reaction mechanisms

**Objectives**
Write multiple-step reaction pathways for synthesizing organic compounds.

**Objectives**
Identify isomeric relationships between molecules (constitutional isomers, diastereomers, entantiomers, etc.).

**Objectives**
Predict stereochemistry and configurations of products obtained during organic reactions.

**Objectives**
Identify, draw and name organic molecules based upon principles of spectroscopy.

**Objectives**
Explain, in writing organic concepts presented in the lecture and/or lab.

## CIS110 - Introduction to Computers

### Overview

**Course Description**
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. This course has been approved for transfer under the CAA as a general education course in Mathematics (Quantitative). This course has been approved for transfer under the ICAA as a general education course in Mathematics (Quantitative).

### Credit Hours

3

**Course Typically Offered**
Fall, Spring, Summer

### Student Learning Outcomes

**Objectives**
Identify the basic elements required in a computer system.

**Objectives**
Produce electronic documents using various software applications.

**Objectives**
Illustrate the role of the computer for personal and professional uses.

**Objectives**
Demonstrate familiarization with basic computer hardware components including processor, input, output, and storage devices.

**Objectives**
Operate computer hardware and software, including operating system software.

**Objectives**
Demonstrate digital citizenship.

**Objectives**
Define and apply basic computer concepts and terminology.

**Objectives**
Construct documents, spreadsheets, and presentations using Microsoft Office.

**Objectives**
Operate the Internet and its resources, Windows, and Microsoft Office.

**Objectives**
Differentiate when to use Microsoft Word, Microsoft Excel, and Microsoft PowerPoint to complete certain tasks.

**Objectives**
Demonstrate proficiency in Microsoft Word, Excel, and PowerPoint through practical application.

# CIS111 - Basic PC Literacy

## Overview

**Course Description**
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.

## Credit Hours
2

**Course Typically Offered**
Fall

## Student Learning Outcomes

**Objectives**
Demonstrate familiarization with basic computer hardware components including processor, input, output, and storage devices.

**Objectives**
Operate computer hardware and software, including operating system software.

**Objectives**
Define and apply basic computer concepts and terminology.

**Objectives**
Demonstrate digital citizenship.

**Objectives**
Construct documents, spreadsheets, databases, and presentations using Microsoft Office.

**Objectives**
Operate the Internet and its resources, Windows, and Microsoft Office.

**Objectives**
Differentiate when to use Microsoft Word, Microsoft Excel, and Microsoft PowerPoint to complete certain tasks.

**Objectives**
Demonstrate proficiency in Microsoft Word, Excel, and PowerPoint through practical application.

**Objectives**
Design spreadsheets, documents, and presentations using Microsoft Office.

# CIS115 - Introduction to Programming and Logic

## Overview

**Course Description**
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.

## Credit Hours

3

# CJC110 - Basic Law Enforcement BLET

## Overview

**Course Description**
This course covers the basic skills and knowledge needed for entry-level employment as a law enforcement officer in North Carolina. Topics include those mandated by North Carolina Administration Code as essential for functioning in law enforcement. Upon completion, the student should be able to demonstrate competence in the topics required for the state comprehensive certification examination.

## Credit Hours

20

**Course Typically Offered**
Fall, Spring, Summer

## Student Learning Outcomes

**Objectives**
Cadets will be able to list the elements for Resist, Delay, and Obstruct an Officer.

**Objectives**
Cadets will be able to list the elements of Larceny.

**Objectives**
Cadets will know the difference in law enforcement response between criminal offenses and civil matters, particularly regarding landlord/tenant conflicts.

**Objectives**
On the state exam, cadets will show an improvement in Rapid Deployment questions.

# CJC111 - Introduction to Criminal Justice

## Overview

**Course Description**
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.

## Credit Hours

3

**Course Typically Offered**
Fall, Spring, Summer

## Student Learning Outcomes

**Objectives**
Define and describe the major criminal system components;

**Objectives**
Describe the interrelationships between the system components; and

**Objectives**
Evaluate career options.

# CJC112 - Criminology

## Overview

**Course Description**
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.

## Credit Hours

3

**Course Typically Offered**
Fall, Spring, Summer

## Student Learning Outcomes

**Objectives**
Explain and discuss various theories of crime causation;

**Objectives**
Classify various social response;

**Objectives**
Compare statistical analysis of criminal behavior, and

**Objectives**
Identify past, present, and future social control initiatives.

## CJC113 - Juvenile Justice

### Overview

**Course Description**
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.

### Credit Hours

3

**Course Typically Offered**
Fall, Spring, Summer

### Student Learning Outcomes

**Objectives**
Identify and discuss various psychological theories used to explain delinquency

**Objectives**
Identify and discuss the effects that juvenile delinquency has on our society

**Objectives**
Demonstrate proper knowledge of the juvenile justice system history

**Objectives**
Identify and compare various programs and services available to youth offenders

## CJC114 - Investigative Photography

### Overview

**Course Description**
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.

### Credit Hours

2

### Student Learning Outcomes

**Objectives**
Provide an overview of crime scene photography, to include:

**Objectives**
Demonstrate understanding of composition and camera usage, to include; -Camera nomenclature and general settings -General camera fundtions -Shutter speed -ISO -F/Stop, aperture, and Depth of Field -Filling the frame -Fill flash-photography in shaded and unshaded areas -Image quality and bracketing -Night photography

**Objectives**
Legal Issues of Crime Scene Photography

## CJC115 - Crime Scene Photography

### Overview

**Course Description**
This course covers methodologies for photographing crime scenes including their application to forensic sciences, the legal system, and the proper use of digital cameras and accessories. Topics include digital cameras, operational functions required to properly photograph physical evidence and crime scenes, factors affecting admissibility of crime scene photographs, and methods and techniques specific to photographing crime scenes. Upon completion, students should be able to operate digital cameras using appropriate settings to control exposure and depth of field, properly compose various types of crime scene photographs, and use specialized techniques to properly photograph key items of evidence.

### Credit Hours

3

**Course Typically Offered**
Fall

## CJC120 - Interviews/Interrogations

### Overview

**Course Description**
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.

### Credit Hours
2

**Course Typically Offered**
Fall, Spring

### Student Learning Outcomes

**Objectives**
Conduct interviews/interrogations in a legal, efficient, and professional manner;

**Objectives**
Demonstrate the ability to extract the truth from suspects, witnesses, and victims;

**Objectives**
Describe the interview/interrogation process.

## CJC121 - Law Enforcement Operations

### Overview
**Course Description**
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.

### Credit Hours
3

**Course Typically Offered**
Fall, Spring

### Student Learning Outcomes

**Objectives**
Describe the sources or law enforcement;

**Objectives**
Identify various trends in law enforcement operation; and

**Objectives**
Discuss the proper role of law enforcement in the community.

## CJC122 - Community Policing

### Overview
**Course Description**
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.

### Credit Hours
3

**Course Typically Offered**
Fall, Spring

### Student Learning Outcomes

**Objectives**
Define community policing;

**Objectives**
Describe how community policing strategies solves problems; and

**Objectives**
Compare community policing to traditional policing.

## CJC131 - Criminal Law

### Overview
**Course Description**
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.

### Credit Hours
3

**Course Typically Offered**
Fall, Spring

### Student Learning Outcomes

**Objectives**
Discuss the sources of law.

**Objectives**
Identify and interpret the appropriate statutes in criminal law; and

**Objectives**
Construct the proper elements to the major crimes.

## CJC132 - Court Procedure & Evidence

### Overview

**Course Description**
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.

### Credit Hours

3

**Course Typically Offered**
Fall, Spring

### Student Learning Outcomes

**Objectives**
Identify the development of American court structure and procedures; +

**Objectives**
Summarize the functions and jurisdiction of law enforcement, prosecutors, defense attorneys, judges, juries, witnesses, and other court officials;

**Objectives**
Define terminology used in the criminal justice system; especially as it pertains to court procedures;

**Objectives**
Discuss the role of evidence in the judicial system

## CJC141 - Corrections

### Overview

**Course Description**
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.

### Credit Hours

3

**Course Typically Offered**
Fall

### Student Learning Outcomes

**Objectives**
Identify the various components of the correctional system.

**Objectives**
Explain the functions of corrections;

**Objectives**
Explain the processes of the correctional system.

## CJC144 - Crime Scene Processing

### Overview

**Course Description**
This course introduces the theories and practices of crime scene processing and investigating. Topics include legal considerations at the crime scene, processing indoor and outdoor scenes, recording, note taking, collection and preservation of evidence and submission to the crime laboratory. Upon completion, the student should be able to evaluate and search various crime scenes and demonstrate theapprpriate techniques.

### Credit Hours

3

**Course Typically Offered**
Fall, Spring

### Student Learning Outcomes

**Objectives**
Describe the fundamental concepts of physical evidence processing and collection;

**Objectives**
Demonstrate the ability to reconstruct a crime scene;

**Objectives**
Photograph, sketch, and document various crimes scenes and submit evidence to a crime laboratory

## CJC146 - Trace Evidence

### Overview

**Course Description**
This course provides a study of trace evidence as it relates to forensic science. Topics include collection, packaging, and preservation of trace evidence from crime scenes such as bombings, fires and other scenes. Upon completion, students should be able to demonstrate the fundamental concepts of trace evidence collection, preservation and submission to the crime laboratory.

### Credit Hours

3

**Course Typically Offered**
Spring

### Student Learning Outcomes

**Objectives**
Demonstrate the fundamental concepts of trace evidence collection;

**Objectives**
Preserve evidence;

**Objectives**
Submit evidence to a crime laboratory.

## CJC151 - Introduction to Loss Prevention

### Overview

**Course Description**
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.

### Credit Hours

3

**Course Typically Offered**
Fall, Summer

### Student Learning Outcomes

**Objectives**
Identify the basic components of private security history, business and concepts.

**Objectives**
Discuss the basic functions of various private security categories; i.e., premises security, business security, personal and employment-related security, retail security and loss prevention, and information and computer security.

**Objectives**
Explain private security operations

## CJC152 - Introduction to Security and Protective

### Overview

**Course Description**
This course introduces the various components, processes, and operational characteristics associated with private security and loss prevention services. Topics include armed/unarmed security guard/officer hiring criteria including licensing, job responsibilities, career pathways, professional conduct and communication, public relations, emergency procedures, law, first aide, legal issues and liability, workplace violence, patrol techniques, and the security industry. Upon completion, students should be able to evaluate career options and define and describe the major system components, processes, and operational characteristics associated with the private security industry.

### Credit Hours

3

## CJC153 - Private Security Operations

### Overview

**Course Description**
This course introduces the various operations associated with private security and loss prevention services. Topics include strategies for protecting individuals and company assets, report writing, interview techniques, crime and accident prevention, courtroom procedures, observation techniques, traffic direction, surveillance, substance abuse, law enforcement relationships, and emergency procedures. Upon completion, students should be able to demonstrate an understanding of the various operational characteristics common to the private security industry.

### Credit Hours

3

# CJC154 - Private Security Business

## Overview

**Course Description**
This course introduces the business and managerial aspects specific to private security and loss prevention services. Topics include profitability, personnel management, finances, rules, policies, and law, organizational structure, sales management, and issues specific to private security and loss prevention services. Upon completion, students should be able to explain the basic characteristics required of an effective private security and loss prevention services business.

## Credit Hours

3

# CJC160 - Terrorism: Underlying Issues

## Overview

**Course Description**
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.

## Credit Hours

3

**Course Typically Offered**
Spring

## Student Learning Outcomes

**Objectives**
Explain the role and impact of symbolism in terrorist activities

**Objectives**
Analyze the common traits of extremist ideologies and the perspectives of their followers

**Objectives**
Evaluate different perspectives on classifying acts of violence as terrorism, considering the context and motivations of those involved.

**Objectives**
Synthesize various definitions of terrorism to create a comprehensive understanding of the term

**Objectives**
Identify and apply sociological theories of intergroup conflict and collective violence to posit explanations for political violence

**Objectives**
Critically evaluate the ethical implications of extremist justifications for political violence

**Objectives**
Evaluate the effectiveness of state responses to violence.

# CJC170 - Critical Incident Management for Public Safety

## Overview

**Course Description**
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.

## Credit Hours

3

## Student Learning Outcomes

**Objectives**
Identify and discuss managerial techniques and legal issues;

**Objectives**
Describe response procedures to critical incidents;

**Objectives**
Discuss the theoretical and applied models to understand and manage disasters, terrorism, and school/work place violence

# CJC212 - Ethics & Community Relations

## Overview

**Course Description**
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.

### Credit Hours
3

**Course Typically Offered**
Fall, Spring

### Student Learning Outcomes

**Objectives**
Demonstrate how to apply ethical considerations to the decision-making process in identifiable criminal justice situations.

**Objectives**
Discuss ethical systems; social change, values, and norms; cultural diversity; citizen involvement in criminal justice issues.

**Objectives**
Explain and discuss challenges of drugs in our society.

**Objectives**
Classify various drugs in relation to crime and the Criminal Justice system.

**Objectives**
Identify drug taking behavior and causation in our society.

**Objectives**
Discuss prevention, protection and deterrence of substance abuse.

## CJC213 - Substance Abuse

### Overview

**Course Description**
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.

### Credit Hours
3

**Course Typically Offered**
Fall, Spring

### Student Learning Outcomes

**Objectives**
Explain and discuss challenges of drugs in our society.

**Objectives**
Classify various drugs in relation to crime and the Criminal Justice system.

**Objectives**
Identify drug taking behavior and causation in our society.

**Objectives**
Discuss prevention, protection and deterrence of substance abuse.

## CJC214 - Victimology

### Overview

**Course Description**
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.

### Credit Hours
3

**Course Typically Offered**
Fall, Spring

### Student Learning Outcomes

**Objectives**
Discuss and identify victims.

**Objectives**
Demonstrate understanding of the uniqueness of victim's roles.

# CJC215 - Organization & Administration

## Overview

**Course Description**
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.

## Credit Hours

3

**Course Typically Offered**
Fall

## Student Learning Outcomes

**Objectives**
Identify and discuss the basic components of a criminal justice organization and its administration operations;

**Objectives**
Identify and discuss the basic functions of a criminal justice organization and its administration operations;

**Objectives**
Discuss the recruiting, training and retention of personal

# CJC221 - Investigative Principles

## Overview

**Course Description**
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.

## Credit Hours

4

**Course Typically Offered**
Spring

## Student Learning Outcomes

**Objectives**
Describe the fundamentals of criminal investigations.

**Objectives**
Discuss various follow-up investigative processes

**Objectives**
Identify the techniques used to obtain information from subjects involved in the criminal investigative process

**Objectives**
Discuss the elements of and the techniques to investigate important criminal violations that include: -Death investigations -Robbery -Assault and related offenses -Missing and abducted persons -Crimes against children -Crime against property -Terrorism

# CJC222 - Criminalistics

## Overview

**Course Description**
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.

## Credit Hours

3

**Course Typically Offered**
Fall, Spring

## Student Learning Outcomes

**Objectives**
Compare and contrast the different methods of crime scene investigation and evidence collection in classroom discussions;

**Objectives**
Compare and contrast different specialized scientific methods commonly utilized by the criminal investigator;

**Objectives**
Differentiate the applied forensic methods used to evaluate various types of evidence;

**Objectives**
Identify and process the common steps taken during a scene search; and

**Objectives**
Evaluate the limitations of forensic techniques and interpretations.

# CJC225 - Crisis Intervention

## Overview

**Course Description**
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.

## Credit Hours

3

**Course Typically Offered**
Fall, Spring, Summer

## Student Learning Outcomes

**Objectives**
Provide insightful analysis of emotional/stressful incidents;

**Objectives**
Identify and interpret behavior preceding violent situations; and

**Objectives**
Construct the proper resolution to crisis situations.

# CJC231 - Constitutional Law

## Overview

**Course Description**
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.

## Credit Hours

3

**Course Typically Offered**
Fall, Spring

## Student Learning Outcomes

**Objectives**
Identify/discuss the basic structure of the Constitution;

**Objectives**
Identify/discuss constitutional rights.

**Objectives**
Discuss federal procedure as it relates to the Supreme Court.

# CJC232 - Civil Liability

## Overview

**Course Description**
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.

## Credit Hours

3

**Course Typically Offered**
Spring

## Student Learning Outcomes

**Objectives**
Explain civil trials;

**Objectives**
Describe procedures;

**Objectives**
Discuss contemporary liability issues.

## CJC240 - Law Enforcement Management & Supervision

### Overview

**Course Description**
This course provides a study of the best known methods and practices of police leadership and management. Topics include the role of the manager in law enforcement, communications, time-management in law enforcement, managing problems, training and law enforcement productivity. Upon completion, students should be able to identify and discuss methods and practices capable of moving law enforcement agencies forward into the twenty-first century.

### Credit Hours

3

### Student Learning Outcomes

**Objectives**
Discuss methods and practices capable of moving law enforcement agencies forward into the twenty-first century;

**Objectives**
Describe the role of the manager in law enforcement;

**Objectives**
Discuss the importance of communications and time-management in law enforcement;

**Objectives**
Demonstrate knowledge of training and law enforcement productivity.

## CJC245 - Friction Ridge Analysis

### Overview

**Course Description**
This course introduces the basic elements of fingerprint technology and techniques applicable to the criminal justice field. Topics include the history and meaning of fingerprints, pattern types and classification filing sequence, searching and referencing. Upon completion, the students should be able to discuss and demonstrate the fundamental techniques of basic fingerprint technology.

### Credit Hours

3

**Course Typically Offered**
Spring

### Student Learning Outcomes

**Objectives**
Explain the history of fingerprint analysis

**Objectives**
Explain the theory of fingerprint analysis

**Objectives**
Categorize a given fingerprint into various categories

**Objectives**
Identify common fingerprint patterns from samples

**Objectives**
Explain the process of fingerprint collection and classification

## CJC246 - Advanced Friction Ridge Analysis

### Overview

**Course Description**
This course introduces the theories and processes of advanced friction ridge analysis. Topics include evaluation of friction ridges, chart preparation, comparative analysis for values determination rendering proper identification, chemical enhancement and AFIS preparation and usage. Upon completion, students must show an understanding of proper procedures for friction ridge analysis through written testing and practical exercises.

### Credit Hours

3

**Course Typically Offered**
Fall, Spring

### Requisites

**Simple Requisites**

**State prerequisite**
**Type**
Prerequisite

Take CJC-245

Take CJC-245;

### Student Learning Outcomes

**Objectives**
Define various terms involved in the area of fingerprint analysis and comparison

**Objectives**
Discuss the scientific basis of fingerprints

**Objectives**
Describe the scientific procedure of ACE/V

**Objectives**
Discuss the Methods and Mechanics of advanced latent Print processing

**Objectives**
Identify latent prints and compare to known impressions

## CJC250 - Forensic Biology I

### Overview

**Course Description**
This course covers important biological principles that are applied in the crime laboratory. Topics include forensic toxicology, forensic serology, microscopy, and DNA typing analysis, with an overview of organic and inorganic analysis. Upon completion, students should be able to articulate how a crime laboratory processes physical evidence submitted by law enforcement agencies.

### Credit Hours

3

### Student Learning Outcomes

**Objectives**
Articulate how a crime laboratory processes physical evidence submitted by law enforcement agencies;

**Objectives**
Demonstrate understanding of forensic toxicology, forensic serology, microscopy, and DNA typing analysis;

**Objectives**
Discuss organic and inorganic analysis techniques.

## CJC251 - Forensic Chemistry I

### Overview

**Course Description**
This course provides a study of the fundamental concepts of chemistry as it relates to forensic science. Topics include physical and chemical properties of substances, metric measurements, chemical changes, elements, compounds, gases, and atomic structure. Upon completion, students should be able to demonstrate an understanding of the fundamental concepts of forensic chemistry.

### Credit Hours

4

### Student Learning Outcomes

**Objectives**
Demonstrate an understanding of the fundamental concepts of forensic chemistry;

**Objectives**
Discuss physical and chemical properties of substances, metric measurements;

**Objectives**
Identify and discuss chemical changes, elements, compounds, gases, and atomic structure.

## CMT120 - Codes and Inspections

### Overview

**Course Description**
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.

### Credit Hours

3

**Course Typically Offered**
Spring

## Student Learning Outcomes

**Objectives**
Describe from start to finish, the permitting and inspection process

**Objectives**
Explain the relevance of Building Inspections

**Objectives**
Demonstrate fluency accessing NC State Building Code information and requirements

**Objectives**
Develop a proficiency identifying common NC State Building Code items and Violations

# COM110 - Introduction to Communication

## Overview

**Course Description**
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.

## Credit Hours

3

**Course Typically Offered**
Fall, Spring, Summer

## Student Learning Outcomes

**Objectives**
Examine the role of perception of self and others in communication

**Objectives**
Analyze how verbal and nonverbal messages contribute to meaning

**Objectives**
Articulate how culture influences communication

**Objectives**
Apply concepts of small group communication to a group project

**Objectives**
Explore how interpersonal communication impacts relationships with others

**Objectives**
Deliver an effective presentation using visual aids and a speech outline

**Objectives**
Explain the purpose of mass communication and its influence on an individual's worldview

# COM120 - Introduction to Interpersonal Communication

## Overview

**Course Description**
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.

## Credit Hours

3

**Course Typically Offered**
Fall, Spring, Summer

## Student Learning Outcomes

**Objectives**
Demonstrate interpersonal skills

**Objectives**
Apply basic principles of group discussion.

**Objectives**
Manage conflict in interpersonal communication situations.

# COM231 - Public Speaking

## Overview

**Course Description**
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.

## Credit Hours

3

**Course Typically Offered**
Fall, Spring, Summer

## Student Learning Outcomes

**Objectives**
Identify and utilize strategies to manage speech apprehension.

**Objectives**
Model the concept of "listener-oriented" speaking.

**Objectives**
Practice active and critical listening and provide effective constructive feedback to speakers.

**Objectives**
Analyze audiences and devise speaking strategies based on the analyses.

**Objectives**
Define, compare, and apply concepts of speech organization, support, introductions, conclusions, and transitions.

**Objectives**
Create and deliver effective impromptu, informative, and persuasive speeches.

**Objectives**
Assess areas for improvement in nonverbal and vocal speech delivery.

**Objectives**
Demonstrate improvement in speech development and delivery.

# COS111 - Cosmetology Concepts I

## Overview

**Course Description**
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.

## Credit Hours

4

**Course Typically Offered**
Fall, Spring

## Requisites

**Simple Requisites**

**State concurrent or previous courses**
**Type**
Corequisite

Take COS-112

Take COS-112;

## Student Learning Outcomes

**Objectives**
Explain infection control principles and safety as they relate to cosmetology practices.

**Objectives**
Describe the general structure and function of human anatomy and physiology as it applies to cosmetology.

**Objectives**
Analyze the history and career opportunities available in the field of cosmetology.

**Objectives**
Evaluate the role of life skills, professional image, and communication in building a successful cosmetology career.

**Objectives**
Identify and explain the structure and conditions of the hair and scalp, including disorders and diseases.

**Objectives**
Evaluate the principles of haircutting and hair design to determine appropriate services and recommend personalized hair care solutions.

# COS111A - Cosmetology Concepts I

## Overview

**Course Description**
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.

## Credit Hours

2

**Course Typically Offered**
Fall

## Requisites

**Simple Requisites**

**Recommended concurrent or previous courses**
**Type**
Corequisite

Take COS-112

Take COS-112;

# COS111B - Cosmetology Concepts I

## Overview

**Course Description**
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.

## Credit Hours

2

**Course Typically Offered**
Spring

## Requisites

**Simple Requisites**

**Prerequisite**
**Type**
Prerequisite

None Take COS-111A;

Take COS-111A;

**Recommended concurrent or previous courses**
**Type**
Corequisite

Take COS-112

Take COS-112;

# COS112 - Salon I

## Overview

**Course Description**
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.

## Credit Hours

8

**Course Typically Offered**
Fall, Spring

## Requisites

**Simple Requisites**

**State concurrent or previous courses**
**Type**
Corequisite

Take COS-111

Take COS-111;

## Student Learning Outcomes

**Objectives**
Demonstrate proper infection control, handwashing, and disinfection procedures for tools and workstations.

**Objectives**
Perform proper draping techniques for hair services, including shampooing and scalp massage.

**Objectives**
Demonstrate shampooing, conditioning, and scalp massage techniques for different hair and scalp conditions.

**Objectives**
Perform basic haircutting techniques, including blunt, graduated, and layered cuts.

**Objectives**
Demonstrate proper blow-drying, thermal styling, and curling iron manipulation techniques.

**Objectives**
Execute chemical texture services, including permanent waving and relaxer applications.

# COS112A - Salon I

## Overview

**Course Description**
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.

## Credit Hours

4

**Course Typically Offered**
Fall

## Requisites

**Simple Requisites**

**Recommended concurrent or previous courses**
**Type**
Corequisite

Take COS-111

Take COS-111;

# COS112B - Salon I

## Overview

**Course Description**
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.

## Credit Hours

4

**Course Typically Offered**
Spring

## Requisites

**Simple Requisites**

**Prerequisite**
**Type**
Prerequisite

None Take COS-112A;

Take COS-112A;

**Recommended concurrent or previous courses**
**Type**
Corequisite

Take COS-111

Take COS-111;

# COS113 - Cosmetology Concepts II

## Overview

**Course Description**
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.

## Credit Hours

4

**Course Typically Offered**
Fall, Spring

## Requisites

**Simple Requisites**

**Local Corequisite**
**Type**
Corequisite

COS-114

Take COS-114(S24639);

**State prerequisite**
**Type**
Prerequisite

Take All: COS-111 and COS-112

Take COS-111 COS-112;

## Student Learning Outcomes

**Objectives**
Describe the structure, growth, and nutritional needs of the skin.

**Objectives**
Analyze common skin conditions, disorders, and diseases relevant to cosmetology.

**Objectives**
Identify the structure and growth process of nails and analyze nail disorders and diseases.

**Objectives**
Explain the fundamental principles of chemical texture services and their effect on hair structure.

**Objectives**
Assess the composition and function of hair color and its chemical interactions.

**Objectives**
Evaluate methods of hair removal and compare the effectiveness of different techniques.

# COS113AB - Cosmetology Concepts II

## Overview

**Course Description**
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.

## Credit Hours

2

## Requisites

**Simple Requisites**

**Corequisite**
**Type**
Corequisite

COS-114

Take COS-114(S24639);

**State prerequisite**
**Type**
Prerequisite

Take All: COS-111 and COS-112

Take COS-111 COS-112;

# COS113BB - Cosmetology Concepts II

## Overview

**Course Description**
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.

## Credit Hours

2

## Requisites

**Simple Requisites**

**Corequisite**
**Type**
Corequisite

COS-114

Take COS-114(S24639);

**Required concurrent or previous courses**
**Type**
Corequisite

Take COS-113AB

Take COS-113AB;

**State prerequisite**
**Type**
Prerequisite

Take All: COS-111 and COS-112

Take COS-111 COS-112;

# COS114 - Salon II

## Overview

**Course Description**
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.

## Credit Hours
8

**Course Typically Offered**
Fall, Spring

## Requisites
**Simple Requisites**

**Local Corequisite**
**Type**
Corequisite

COS-113

Take COS-113(S24638);

**State prerequisite**
**Type**
Prerequisite

Take All: COS-111 and COS-112

Take COS-111 COS-112;

## Student Learning Outcomes

**Objectives**
Perform hair coloring applications including single-process, lightening, and highlighting techniques.

**Objectives**
Execute advanced hair color techniques, including balayage, root smudging, and color melting.

**Objectives**
Demonstrate professional eyebrow shaping and waxing techniques using soft and hard wax.

**Objectives**
Perform facials, including basic, dry skin, oily skin, and acne-prone treatments.

**Objectives**
Apply basic and advanced nail services, including manicures, pedicures, and enhancements.

**Objectives**
Demonstrate eyelash and brow tinting, lash lifts, and brow lamination techniques.

# COS114AB - Salon II

## Overview
**Course Description**
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.

## Credit Hours
4

## Requisites
**Simple Requisites**

**Corequisite**
**Type**
Corequisite

COS-113

Take COS-113(S24638);

**State prerequisite**
**Type**
Prerequisite

Take All: COS-111 and COS-112

Take COS-111 COS-112;

# COS114BB - Salon II

## Overview
**Course Description**
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.

## Credit Hours
4

### Requisites

**Simple Requisites**

**Corequisite**
**Type**
Corequisite

COS-113

Take COS-113(S24638);

**Required concurrent or previous courses**
**Type**
Corequisite

Take COS-114AB

Take COS-114AB;

**State prerequisite**
**Type**
Prerequisite

Take All: COS-111 and COS-112

Take COS-111 COS-112;

## COS115 - Cosmetology Concepts III

### Overview

**Course Description**
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.

### Credit Hours

4

**Course Typically Offered**
Spring, Summer

### Requisites

**Simple Requisites**

**Corequisite**
**Type**
Corequisite

COS-116

Take COS-116(S24641);

**State prerequisite**
**Type**
Prerequisite

Take All: COS-111 and COS-112

Take COS-111 COS-112;

### Student Learning Outcomes

**Objectives**
Describe the basic principles of electricity and electrical safety as they relate to cosmetology.

**Objectives**
Analyze braiding techniques and their cultural significance in the beauty industry.

**Objectives**
Evaluate different types of wigs and hair additions and their role in hairstyling and hair replacement.

**Objectives**
Explain the principles and techniques of professional facial treatments.

**Objectives**
Assess makeup application techniques for different face shapes and skin types.

**Objectives**
Analyze career planning strategies and the business aspects of the cosmetology industry.

## COS116 - Salon III

### Overview

**Course Description**
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.

### Credit Hours

4

**Course Typically Offered**
Spring, Summer

### Requisites

**Simple Requisites**

**Corequisite**
**Type**
Corequisite

COS-115

Take COS-115(S24640);

**State prerequisite**
**Type**
Prerequisite

Take All: COS-111 and COS-112

Take COS-111 COS-112;

## Student Learning Outcomes

**Objectives**
Demonstrate professional upstyling techniques, including chignons and French pleats.

**Objectives**
Perform braiding and twisting techniques for different hair textures.

**Objectives**
Demonstrate natural hairstyling methods, including locs and Nubian coils.

**Objectives**
Perform customized facials for dry, oily, and acne-prone skin types.

**Objectives**
Apply professional makeup techniques, including contouring and false eyelash application.

**Objectives**
Demonstrate proper infection control and setup for makeup and skincare applications.

# COS117 - Cosmetology Concepts IV

## Overview

**Course Description**
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.

## Credit Hours
2

**Course Typically Offered**
Fall, Spring

## Requisites

**Simple Requisites**

**Corequisite**
**Type**
Corequisite

COS-118

Take COS-118(S24643);

**State prerequisite**
**Type**
Prerequisite

Take All: COS-111 and COS-112

Take COS-111 COS-112;

## Student Learning Outcomes

**Objectives**
Develop a professional career plan for employment in the cosmetology industry.

**Objectives**
Analyze the professional skills required for success in the beauty industry.

**Objectives**
Evaluate business strategies for salon management and entrepreneurship.

**Objectives**
Identify the financial responsibilities and pricing structures used in salon business operations.

**Objectives**
Assess continuing education and licensing renewal requirements for cosmetology professionals.

**Objectives**
Examine strategies for professional networking and marketing in the beauty industry.

## COS118 - Salon IV

### Overview

**Course Description**
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.

### Credit Hours

7

**Course Typically Offered**
Fall, Spring

### Requisites

**Simple Requisites**

**Corequisite**
**Type**
Corequisite

COS-117

Take COS-117(S24642);

**State prerequisite**
**Type**
Prerequisite

Take All: COS-111 and COS-112

Take COS-111 COS-112;

### Student Learning Outcomes

**Objectives**
Demonstrate advanced technical skills in preparation for the state board practical exam.

**Objectives**
Perform advanced styling and cutting techniques, including precision cuts and fades.

**Objectives**
Execute chemical services, including permanent waving, relaxers, and advanced coloring techniques.

**Objectives**
Apply professional makeup and skincare techniques suitable for real-world clients.

**Objectives**
Practice time management and efficiency in performing cosmetology services.

**Objectives**
Demonstrate proficiency in all required practical skills to pass the state board exam.

## COS119 - Esthetics Concepts I

### Overview

**Course Description**
This course covers the concepts of esthetics. Topics include orientation, anatomy, physiology, hygiene, sterilization, first aid, chemistry, basic dermatology, and professional ethics. Upon completion, students should be able to demonstrate an understanding of the concepts of esthetics and meet course requirements.

### Credit Hours

2

**Course Typically Offered**
Fall, Spring

### Student Learning Outcomes

**Objectives**
Analyze life skills, professional image, and communication strategies essential for success in esthetics.

**Objectives**
Explain infection control principles and best practices for maintaining a safe and hygienic esthetics environment.

**Objectives**
Describe the principles of chemistry and chemical safety related to esthetic services and skincare products.

**Objectives**
Evaluate the effects of electricity and electrical safety in esthetics services and equipment use.

**Objectives**
Identify and describe the physiology and histology of the skin, including common disorders and diseases.

**Objectives**
Examine the principles of skin analysis, skincare ingredients, and facial services to determine appropriate services.

## COS120 - Esthetics Salon I

### Overview

**Course Description**
This course covers the techniques of esthetics in a comprehensive experience in a simulated salon setting. Topics include client consultation, facials, body treatments, hair removal, make-up applications, and color analysis. Upon completion, students should be able to safely and competently demonstrate esthetic services on clients in a salon setting.

### Credit Hours

6

**Course Typically Offered**
Fall, Spring

## COS121 - Manicure/Nail Technology I

### Overview

**Course Description**
This course covers techniques of nail technology, hand and arm surface manipulation, and recognition of nail diseases and disorders. Topics include OSHA/safety, sanitation, bacteriology, product knowledge, salesmanship, manicures, artificial applications, pedicures, surface manipulation, and other related topics. Upon completion, students should be able to safely and competently perform nail care, including manicures, pedicures, surface manipulations, decorating and artificial applications in a salon setting.

### Credit Hours

6

**Course Typically Offered**
Fall

### Student Learning Outcomes

**Objectives**
Describe and demonstrate fundamental techniques in nail technology, including shaping, buffing, and enhancement applications.

**Objectives**
Identify common nail diseases and disorders to determine appropriate care and contraindications.

**Objectives**
Explain infection control principles and their relevance to maintaining a safe nail care environment.

**Objectives**
Demonstrate knowledge of nail care products, including chemical composition and proper usage.

**Objectives**
Discuss professional salesmanship techniques to promote nail care services and retail products.

**Objectives**
Perform professional nail care services, including manicures, pedicures, nail artistry, and artificial enhancements, in a salon setting.

## COS125 - Esthetics Concepts II

### Overview

**Course Description**
This course covers more comprehensive esthetics concepts. Topics include nutrition, business management, makeup, and color analysis. Upon completion students should be able to demonstrate an understanding of the advanced esthetics concepts and meet course requirements.

### Credit Hours

2

**Course Typically Offered**
Fall, Spring

## Student Learning Outcomes

**Objectives**
Explain the anatomy and physiology of the skin and its relation to esthetics services.

**Objectives**
Analyze hair growth cycles and explain various methods of hair removal.

**Objectives**
Describe fundamental and corrective makeup techniques, including color theory and application methods.

**Objectives**
Evaluate the use of facial devices and advanced esthetics services in skincare applications.

**Objectives**
Analyze service area setup and the role of the esthetician in creating a safe, comfortable experience.

**Objectives**
Examine career planning, professional ethics, and business principles in the esthetics industry.

# COS126 - Esthetics Salon II

## Overview

**Course Description**
This course provides experience in a simulated esthetics setting. Topics include machine facials, aromatherapy, surface manipulation in relation to skin care, electricity, and apparatus. Upon completion, students should be able to demonstrate competence in program requirements and the areas covered on the Cosmetology licensing examination for Estheticians.

## Credit Hours

6

**Course Typically Offered**
Fall, Spring

## Student Learning Outcomes

**Objectives**
Perform advanced facials, including manual exfoliation, microdermabrasion, chemical peels, microneedling, and dermaplaning.

**Objectives**
Demonstrate professional makeup application techniques, including contouring and corrective makeup.

**Objectives**
Perform advanced machine facials using Woods lamp, galvanic current, LED therapy, and suction devices.

**Objectives**
Demonstrate proficiency in artificial lash application, lash lifts, brow lamination, and lash/brow tinting.

**Objectives**
Demonstrate proper infection control, handwashing, and disinfection procedures for esthetics tools and workstations.

**Objectives**
Demonstrate readiness for the esthetics state board practical exam through comprehensive service execution.

# COS222 - Manicure/Nail Tech. II

## Overview

**Course Description**
This course covers advanced techniques of nail technology and hand and arm surface manipulation. Topics include OSHA/safety, product knowledge, customer service, salesmanship, artificial applications, nail art, and other related topics. Upon completion, students should be able to demonstrate competence necessary for the licensing examination, including advanced nail care, artificial enhancements, and decorations.

## Credit Hours

6

**Course Typically Offered**
Spring

## Requisites

**Simple Requisites**

**State prerequisite**
**Type**
Prerequisite

Take COS-121

Take COS-121(S24327);

## Student Learning Outcomes

**Objectives**
Describe and demonstrate advanced techniques in nail technology, including precision shaping, sculpting, and finishing.

**Objectives**
Identify advanced nail diseases and disorders to determine appropriate care and contraindications.

**Objectives**
Demonstrate product knowledge, including the selection and proper use of advanced nail care products and chemicals.

**Objectives**
Apply professional customer service and salesmanship strategies to promote nail care services and retail products.

**Objectives**
Perform advanced artificial enhancements, nail art, and decorative applications while adhering to industry standards.

**Objectives**
Explain and demonstrate OSHA safety standards and infection control procedures for advanced nail services.

**Objectives**
Demonstrate proficiency in all practical skills required for the state licensing examination, including advanced nail care, artificial enhancements, and nail artistry.

# COS223 - Contemporary Hair Coloring

## Overview

**Course Description**
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.

## Credit Hours

2

**Course Typically Offered**
Spring

## Requisites

**Simple Requisites**

**State prerequisite**
**Type**
Prerequisite

Take All: COS-111 and COS-112

Take COS-111 COS-112;

## Student Learning Outcomes

**Objectives**
Analyze color theory principles and accurately explain hair coloring terminology.

**Objectives**
Demonstrate contemporary hair coloring techniques, including balayage, color melting, and fashion tones in a lab setting.

**Objectives**
Explain and apply product knowledge, including color formulation, mixing, and application techniques.

**Objectives**
Assess a client's hair color needs and safely perform hair coloring services, including corrective color applications.

# COS224 - Trichology & Chemistry

## Overview

**Course Description**
This course is a study of hair and the interaction of applied chemicals. Emphasis is placed on pH actions and the reactions and effects of chemical ingredients. Upon completion, students should be able to demonstrate an understanding of chemical terminology, pH testing, and chemical reactions on hair.

### Credit Hours
2

**Course Typically Offered**
Fall

### Student Learning Outcomes

**Objectives**
Explain pH levels and analyze the chemical reactions and effects of ingredients used in hair treatments.

**Objectives**
Define and apply key chemical terminology related to hair treatments, color processing, and chemical services.

**Objectives**
Demonstrate pH testing techniques to assess the compatibility of products with different hair types.

**Objectives**
Analyze the effects of chemical reactions on the hair structure and integrity after processing treatments.

## COS253 - Esthetics Instructional Concepts I

### Overview

**Course Description**
This course introduces esthetic instructional concepts and skills. Topics include orientation, theories of education, unit planning, daily lesson plans, laboratory management, student assessment in a laboratory setting. Upon completion, students should be able to demonstrate esthetic services and instruct and objectively assess student performance in a classroom setting.

### Credit Hours
11

### Student Learning Outcomes

**Objectives**
Identify and discuss theories of education.

**Objectives**
Discuss unit planning, daily lesson plans, laboratory management, and student assessment in a laboratory setting.

**Objectives**
Demonstrate esthetic services and instruct and objectively assess student performance in a classroom setting.

## COS254 - Esthetic Instructional Concepts II

### Overview

**Course Description**
This course covers advanced esthetic instructional concepts and skills. 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 demonostrate competencies in the areas covered by the Esthetics Instructor Licensing Examination and meet program requirements.

### Credit Hours
11

### Student Learning Outcomes

**Objectives**
Complete a practical demonstration.

**Objectives**
Develop and administer lesson plans, assessment tools and record keeping.

**Objectives**
Demonstrate competencies in the areas covered by the Esthetics Instructor Licensing Examination and meet program requirements.

## COS271 - Instructor Concepts I

### Overview

**Course Description**
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.

### Credit Hours
5

## Requisites

**Simple Requisites**

**State concurrent or previous courses**
**Type**
Corequisite

Take COS-272

Take COS-272;

## Student Learning Outcomes

**Objectives**
Identify and discuss theories of education.

**Objectives**
Discuss unit planning, laboratory management, student assessment and record keeping.

**Objectives**
Develop lesson plans and demonstrate supervisory techniques.

**Objectives**
Assess student performance in a classroom setting.

# COS272 - Instructor Practicum I

## Overview

**Course Description**
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.

## Credit Hours

7

## Requisites

**Simple Requisites**

**State concurrent or previous courses**
**Type**
Corequisite

Take COS-271

Take COS-271;

## Student Learning Outcomes

**Objectives**
Demonstrate salon services.

**Objectives**
Demonstrate supervisory techniques.

**Objectives**
Objectively assess the entry-level student.

# COS273 - Instructor Concepts II

## Overview

**Course Description**
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.

## Credit Hours

5

**Course Typically Offered**
Spring

## Requisites

**Simple Requisites**

**State prerequisite**
**Type**
Prerequisite

Take All: COS-271 and COS-272

Take COS-271 COS-272;

**State concurrent or previous courses**
**Type**
Corequisite

Take COS-274

Take COS-274;

## Student Learning Outcomes

**Objectives**
Complete practical demonstrations.

**Objectives**
Demonstrate lesson planning and lecture techniques.

**Objectives**
Develop and administer assessment tools, record keeping and other related topics.

**Objectives**
Demonstrate supervision techniques, assess student performance in a classroom setting and keep accurate records.

## COS274 - Instructor Practicum II

### Overview

**Course Description**
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.

### Credit Hours

7

**Course Typically Offered**
Spring

### Requisites

**Simple Requisites**

**State prerequisite**
**Type**
Prerequisite

Take All: COS-271 and COS-272

Take COS-271 COS-272;

**State concurrent or previous courses**
**Type**
Corequisite

Take COS-273

Take COS-273;

### Student Learning Outcomes

**Objectives**
Complete practical demonstrations.

**Objectives**
Demonstrate supervision and advanced student assessment.

**Objectives**
Demonstrate competence in the areas covered by the Instructor Licensing Examination and meet program completion requirements.

## CSC113 - Artificial Intelligence Fundamentals

### Overview

**Course Description**
This course provides a survey of artificial intelligence and machine learning. Topics include the history, development, and current applications of artificial intelligence and machine learning. Upon completion, students should be able to demonstrate general artificial intelligence and machine learning concepts.

### Credit Hours

3

### Student Learning Outcomes

**Objectives**
Define and describe the six main domains of Artificial Intelligence and explain real-world applications of each with specific examples.

**Objectives**
Define generative AI and describe its three main architectures along with their corresponding training methods, using labeled diagrams and examples.

**Objectives**
Define, compare, and contrast key techniques in data wrangling and data exploration (e.g., managing missing values, normalization, outlier detection, and visualization methods) by applying them to a sample dataset.

**Objectives**
Define input/output features, interpret scatter diagrams, and explain the role of loss functions in linear regression models, then analyze a simple linear regression example using labeled components.

**Objectives**
Describe how the K-Nearest Neighbors (KNN) algorithm uses supervised learning and how the K-Means algorithm uses unsupervised learning, then compare their objectives, input requirements, and output interpretations.

**Objectives**
Use Python and scikit-learn to implement and evaluate machine learning models for linear regression, binary classification, and polynomial regression, achieving reasonable accuracy on a holdout test set for classification tasks and interpreting model coefficients and performance metrics.

# CSC118 - Swift Programming I

## Overview

**Course Description**
This course introduces the development of iOS applications and Apple applications using Swift programming language. Emphasis is placed on syntax, object-oriented principles, memory management, and functional concepts of Swift programming. Upon completion, students should be able to develop fully functional iOS and Apple applications using Swift programming language.

## Credit Hours

3

## Student Learning Outcomes

**Objectives**
Code in Swift using the code concepts used by IOS developers

**Objectives**
Use XCode and UIKit to build IOS screens using stock UI elements

**Objectives**
Create multipage IOS apps

**Objectives**
Debug and test IOS apps

**Objectives**
Deploy IOS apps to local IOS devices

# CSC121 - Python Programming

## Overview

**Course Description**
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.

## Credit Hours

3

# CSC134 - C++ Programming

## Overview

**Course Description**
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.

## Credit Hours

3

**Course Typically Offered**
Fall

## Student Learning Outcomes

**Objectives**
Describe basic hardware and software components of a computer system.

**Objectives**
Describe the terms compiler and Integrated Development Environment (IDE).

**Objectives**
Describe structured design and object-oriented design programming methodologies.

**Objectives**
Describe the basic components of a C++ program (i.e., functions, special symbols, identifiers).

**Objectives**
Design, code and test programs using the C++ programming language.6
Trace and debug programs written in the C++ programming language.

# CSC139 - Visual BASIC Programming

## Overview

**Course Description**
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.

## Credit Hours

3

# CSC151 - JAVA Programming

## Overview

**Course Description**
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.

## Credit Hours

3

**Course Typically Offered**
Fall, Spring

## Student Learning Outcomes

**Objectives**
Describe basic hardware and software components of a computer system.

**Objectives**
Define structured design and object-oriented design

**Objectives**
Describe the basic components of a Java program programming methodologies.

**Objectives**
Design, code and test programs using the Java.

# CSC218 - Swift Programming II

## Overview

**Course Description**
This course introduces advanced iOS application development using the Swift programming language. Emphasis is placed on navigation, data manipulation, web services, prototyping, debugging, and project planning. Upon completion, students should be able to develop advanced multifunctional iOS and Apple applications using the Swift programming language.

## Credit Hours

3

## Requisites

**Simple Requisites**

**State prerequisite**
**Type**
Prerequisite

Take CSC-118

Take CSC-118;

## Student Learning Outcomes

**Objectives**
Use tables to display lists of information, to allow users to interact with the information.

**Objectives**
Organize the files, structures, and classes in IOS apps, making it easier to maintain

**Objectives**
Save data to the IOS device, so that any information the user enters will persist on the device

**Objectives**
To request information from a web service and to use that information within an app

# CST111 - Construction I

## Overview

**Course Description**
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.

## Credit Hours

4

**Course Typically Offered**
Fall, Spring

## Student Learning Outcomes

**Objectives**
Set up a construction worksite including the safe and effective use of all typical construction tools.

**Objectives**
Demonstrate competency in the use of measuring and mathematical computing tools such as tape measure, speed square and framing square.

**Objectives**
Demonstrate proficiency in the safe use of hand and power tools

**Objectives**
Execute, in actual scale, conventional and high performance construction framing techniques required to build a house.

**Objectives**
Apply critical thinking skills: in choosing proper and best construction materials per application; the installation of conventional and high performance construction techniques; solving work flow problems; and navigating the challenges of the construction industry.

**Objectives**
Communicate effectively with peers towards harmonious and productive work flow.

# CST112 - Construction II

## Overview

**Course Description**
This course covers building methods and materials used to dry-in a building. Topics include safety, ceiling/roof framing applications, roof finishes, windows, and exterior doors. Upon completion, students should be able to safely erect different roof types and properly install windows and exterior doors, roofing, and exterior finish materials.

## Credit Hours

4

**Course Typically Offered**
Spring

## Requisites

**Simple Requisites**

**State prerequisite**
**Type**
Prerequisite

Take CST-111

Take CST-111;

## Student Learning Outcomes

**Objectives**
Set up a construction worksite including the safe and effective use of all typical construction tools.

**Objectives**
Demonstrate competency in the use of measuring and mathematical computing tools such as tape measure, speed square and framing square.

**Objectives**
Demonstrate proficiency in the safe use of hand and power tools

**Objectives**
Execute, in actual scale, conventional and high performance exterior finishes and envelope details including windows and doors required to build a house.

**Objectives**
Apply critical thinking skills: in choosing proper and best construction materials per application; the installation of conventional and high performance techniques; solving work flow problems; and navigating the challenges of the construction industry.

**Objectives**
Communicate effectively with peers towards harmonious and productive work flow.

## CST113 - Construction III

### Overview

**Course Description**
This course covers building methods and materials used to complete the interior of a structure. Topics include safety, installation of thermal and acoustical barriers, and interior finishes including millwork, cabinets, interior doors, flooring, and wall treatments. Upon completion, students should be able to safely and accurately install interior treatments including insulation, paneling, drywall, molding, doors, flooring, and cabinetry.

### Credit Hours

4

**Course Typically Offered**
Spring, Summer

### Requisites

**Simple Requisites**

**State prerequisite**
**Type**
Prerequisite

Take CST-112

Take CST-112;

### Student Learning Outcomes

**Objectives**
Set up a construction worksite including the safe and effective use of all typical construction tools.

**Objectives**
Demonstrate competency in the use of measuring and mathematical computing tools such as tape measure, speed square and framing square.

**Objectives**
Demonstrate proficiency in the safe use of hand and power tools

**Objectives**
Execute, in actual scale, the installation of interior finishes such as thermal and acoustical barriers, millwork, cabinets, interior doors, flooring, and wall treatments.

**Objectives**
Apply critical thinking skills: in choosing proper and best construction materials per application; the installation of conventional and high performance construction techniques; solving work flow problems; and navigating the challenges of the construction industry.

**Objectives**
Communicate effectively with peers towards harmonious and productive work flow.

## CST131 - OSHA/Safety/Certification

### Overview

**Course Description**
This course covers the concepts of work site safety. Topics include OSHA regulations, tool safety, and certifications which relate to the construction industry. Upon completion, students should be able to identify and maintain a safe working environment based on OSHA regulations and maintain proper records and certifications.

### Credit Hours

3

**Course Typically Offered**
Fall, Spring

### Student Learning Outcomes

**Objectives**
Identify construction workplace hazards and implement appropriate mitigation and protection methods.

**Objectives**
Implement a construction worksite prioritizing the safe and effective use of all typical construction tools, material handling, and equipment operation.

**Objectives**
Apply critical thinking skills to evaluate, avoid, and mitigate potential unsafe hazards in the workplace.

**Objectives**
Communicate effectively to demonstrate professionalism in prioritizing a workplace culture of safety.

**Objectives**
Model a knowledge base and proactive behavior that recognizes the inherent danger in the construction occupation and values a culture of safety.

## CST150 - Building Science

### Overview

**Course Description**
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.

### Credit Hours

3

**Course Typically Offered**
Fall, Spring

### Student Learning Outcomes

**Objectives**
Describe the concepts and techniques behind high performance building systems.

**Objectives**
Demonstrate an ability to utilize the tools to perform field measurements of building performance.

**Objectives**
Explain how building systems interact and perform.

**Objectives**
Identify and understand career pathways between Building Science and Construction

## CST221 - Statics/Structures

### Overview

**Course Description**
This course covers the principles of statics and strength of materials as applied to structural building components. Topics include forces on columns, beams, girders, and footings and connection points when timber, steel, and concrete members are used. Upon completion, students should be able to accurately analyze load conditions present in structural members.

### Credit Hours

4

**Course Typically Offered**
Spring

### Requisites

**Simple Requisites**

**State prerequisite**
**Type**
Prerequisite

Take One Set: Set 1: ARC-112 and MAT-110 Set 2: ARC-112 and MAT-121 Set 3: ARC-112 and MAT-171 Set 4: CAR-112 and MAT-110 Set 5: CAR-112 and MAT-121 Set 6: CAR-112 and MAT-171 Set 7: CST-112 and MAT-110 Set 8: CST-112 and MAT-121 Set 9: CST-112 and MAT-171

Take 1 group; # Take MAT-110(S23926) ARC-112(S23271); # Take MAT-121(S23927) ARC-112(S23271); # Take MAT-171(S23934) ARC-112(S23271); # Take MAT-110(S23926) CAR-112(S16249); # Take MAT-121(S23927) CAR-112(S16249); # Take MAT-171(S23934) CAR-112(S16249); # Take MAT-110(S23926) CST-112; # Take MAT-121(S23927) CST-112; # Take MAT-171(S23934) CST-112;

### Student Learning Outcomes

**Objectives**
Describe Newton's 3 Laws of Motion and how they apply to structures.

**Objectives**
Solve for resultant vectors from force vectors

**Objectives**
Illustrate Free-Body diagrams and apply equilibrium equations

**Objectives**
Calculating scalar moments on beams, moment of a force, and couple moments

**Objectives**
Evaluate the structural capabilities of trusses, shear walls, etc.

**Objectives**
Apply friction, moment of inertia, and center of gravity to design concepts

## CST241 - Planning/Estimating I

### Overview

**Course Description**
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.

### Credit Hours

3

**Course Typically Offered**
Spring

### Requisites

**Simple Requisites**

**State prerequisite**
**Type**
Prerequisite

Take One: BPR-130, MAT-121, or MAT-171

Take BPR-130(S23275) MAT-121(S23927) or MAT-171(S23934);

### Student Learning Outcomes

**Objectives**
Apply Planning and Scheduling process and flow to project scenarios

**Objectives**
Calculate relevant construction mathematical equations and geometry including area, volume, layout, and pythagorean theorem in order to calculate construction materials

**Objectives**
Evaluate the applicable work scope per task at hand and the accompanying materials and work flow

**Objectives**
Create accurate project estimates.

## CTI110 - Information Technology Foundations

### Overview

**Course Description**
This course provides an introduction to technology concepts and current trends in IT. Topics include foundational concepts across various IT domains such as, but not limited to, artificial intelligence, database fundamentals, programming principles, and web development. Upon completion, students should be able to demonstrate knowledge in core IT areas and apply skills critical for their academic and professional success.

### Credit Hours

3

## CTI120 - Network and Security Foundations

### Overview

**Course Description**
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.

### Credit Hours

3

## CTI140 - Virtualization Concepts

### Overview

**Course Description**
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.

### Credit Hours

3

**Course Typically Offered**
Fall

## Student Learning Outcomes

**Objectives**
Apply basic principles of programming logic.

**Objectives**
Create a simple website with mark-up tools.

**Objectives**
Create a simple database table.

**Objectives**
List the benefits of implementing virtualization technologies.

**Objectives**
Describe the various virtualization tools that are available

**Objectives**
Create a virtual machine.

**Objectives**
Install operating systems on a virtual machine.

**Objectives**
Manage resources, networking, and other devices for a virtual machine.

**Objectives**
Copy a virtual machine.

**Objectives**
Explain the importance of "availability" as it relates to virtualization

**Objectives**
Demonstrate best practices for deploying applications in a virtual environment.

# CTI289 - Computer Technology Integration Capstone Project

## Overview

**Course Description**
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.

## Credit Hours

3

**Course Typically Offered**
Spring, Summer

## Requisites

**Simple Requisites**

**State prerequisite**
**Type**
Prerequisite

Take All: CTI-110, CTI-120, and CTS-115

Take CTI-110(S22510) CTI-120(S22511) CTS-115(S20996);

## Student Learning Outcomes

**Objectives**
Utilize a systems development methodology to create a new information system.

**Objectives**
Document business user system requirements.

**Objectives**
Develop formal information systems project documentation.

**Objectives**
Design, develop, and implement a formal testing plan.

**Objectives**
Design, develop, and implement a formal training plan.

**Objectives**
Transition the new information system to business users.

## CTS115 - Information Systems Business Concepts

### Overview

**Course Description**
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.

### Credit Hours

3

**Course Typically Offered**
Fall, Spring

### Student Learning Outcomes

**Objectives**
Identify the relationship between the business objectives and the IT requirements of an enterprise.

**Objectives**
Identify attributes that make up a "hybrid business manager."

**Objectives**
Assess the role of technology options for managing business processes.

**Objectives**
Describe foundational Management Information Systems (MIS) benefits

**Objectives**
Describe the steps utilized in MIS systems development

**Objectives**
Describe various types of Cross-Functional MIS used in business and professional environments

**Objectives**
Describe how the information systems facilitate decision making

**Objectives**
Describe how various MIS systems are used with supply chains

**Objectives**
Describe best practices in MIS information security management

**Objectives**
Demonstrate the development of a plan for the creation of create an MIS system

## CTS120 - Hardware/Software Support

### Overview

**Course Description**
This course covers the basic hardware of a personal computer, including installation, operations and interactions with software. Topics include component 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.

### Credit Hours

3

**Course Typically Offered**
Fall, Spring

### Student Learning Outcomes

**Objectives**
Identify appropriate computer equipment and software based on organizational needs.

**Objectives**
Demonstrate ability to upgrade/ maintain existing equipment and software.

**Objectives**
Repair non-functioning personal computers.

**Objectives**
Identify, install, and configure various mobile devices.

**Objectives**
Describe basic networking devices and protocols.

**Objectives**
Install and configure a basic SOHO network.

**Objectives**
Perform basic IP configuration on a PC.

**Objectives**
Demonstrate competencies in upgrading/repairing a PC including installing and configuring I/O, multimedia, communication devices, and network interface cards.

**Objectives**
Identify different types of hardware and components, including basic peripheral devices.

**Objectives**
Demonstrate selection of various components to assemble a working PC.

**Objectives**
Describe basic virtualization and cloud computing concepts.

**Objectives**
Describe basic troubleshooting procedures.10. Demonstrate methods of preventive maintenance.

**Objectives**
Identify the objectives of CompTIA's A+ certification exams and demonstrate an understanding of their testing procedures.

# CTS130 - Spreadsheet

## Overview

**Course Description**
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.

## Credit Hours

3

**Course Typically Offered**
Fall, Spring, Summer

## Student Learning Outcomes

**Objectives**
Create a worksheet with embedded charts and/or graphs.

**Objectives**
Enter formulas and use the Sum, Average, Max, Min, If and advanced financial functions.

**Objectives**
Format fonts, numbers, cells, and other features.

**Objectives**
Create and use formulas.

**Objectives**
Run What-If Analyses, and work with large worksheets.

**Objectives**
Create, sort and query a table.

**Objectives**
Create and process a database using Excel.

# CTS135 - Integrated Software Intro

## Overview

**Course Description**
This course instructs students in the Windows or Linux based program suites for word processing, spreadsheet, database, personal information manager, and presentation software. This course prepares students for introductory level skills in database, spreadsheet, personal information manager, word processing, and

presentation applications to utilize data sharing. Upon completion, students should be able to design and integrate data at an introductory level to produce documents using multiple technologies.

### Credit Hours
4

**Course Typically Offered**
Spring

### Student Learning Outcomes

**Objectives**
Become familiar with the Microsoft Office 2020 applications individually as well as collaboratively.

**Objectives**
Integrate office applications with one another.

**Objectives**
Prepare, design, format, save, view documents, spreadsheets, databases, and presentations using Microsoft Office, and being able to print documents, spreadsheets, database objects, and presentations.

**Objectives**
Integrate data between Word, PowerPoint, and Excel

**Objectives**
Copy data from Excel to Word and paste Excel objects into Word

**Objectives**
Copy a chart from Excel to Word and copy objects to the clipboard

**Objectives**
Embed and edit a Word file in Excel

**Objectives**
Switch between Word and Excel

**Objectives**
Create linked objects and update a linked chart and object

**Objectives**
Use Paste Special to create a link

**Objectives**
Insert a Word file as an object

## CTS220 - Advanced Hardware/Software Support

### Overview
**Course Description**
This course provides advanced knowledge and competencies in hardware and operating system technologies for computer technicians to support personal computers. Emphasis is placed on: configuring and upgrading; diagnosis and troubleshooting; as well as preventive maintenance of hardware and system software. Upon completion, students should be able to install, configure, diagnose, perform preventive maintenance, and maintain basic networking on personal computers.

### Credit Hours
3

**Course Typically Offered**
Spring

### Requisites
**Simple Requisites**

**State prerequisite**
**Type**
Prerequisite

Take CTS-120

Take CTS-120(S23679);

### Student Learning Outcomes

**Objectives**
Compare and contrast different operating systems, including mobile device operating systems.

**Objectives**
Demonstrate use of Windows Utilities and Tools to Support the OS, including command-line tools.

**Objectives**
Configure Microsoft Windows networking concepts on a client/ desktop.

**Objectives**
Use features and tools of the Mac OS and Linux client/desktop operating systems.

**Objectives**
Summarize security strategies for a basic network to secure Windows workstations and mobile devices.

**Objectives**
Troubleshoot microsoft windows OS problems.

**Objectives**
Troubleshoot and resolve PC security issues.

**Objectives**
Troubleshoot mobile OS and application issues.

**Objectives**
Describe best practices for documentation and change management.

**Objectives**
Use proper communication techniques and display professionalism.

**Objectives**
Describe the basic concept of scripting.

# CTS285 - Systems Analysis & Design

## Overview

**Course Description**
This course introduces established and evolving methodologies for the analysis, design, and development of an information system. Emphasis is placed on system characteristics, managing projects, prototyping, CASE/OOM tools, and systems development life cycle phases. Upon completion, students should be able to analyze a problem and design an appropriate solution using a combination of tools and techniques.

## Credit Hours

3

## Requisites

**Simple Requisites**

**Local Prerequisite**
**Type**
Prerequisite

CIS-115

Take CIS-115(S25440);

# CUL110 - Sanitation and Safety

## Overview

**Course Description**
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.

## Credit Hours

2

**Course Typically Offered**
Fall, Spring

## Student Learning Outcomes

**Objectives**
Identify foodborne illnesses.

**Objectives**
Identify and prevent contaminants in food establishment

**Objectives**
Explain and implement a HACCP procedure in a food service establishment using the seven principles

**Objectives**
Demonstrates proper kitchen hygiene and personal hygiene

**Objectives**
Apply proper internal cooking temperatures

**Objectives**
Distinguish the characteristics of FAT TOM by identifying each acronym and the importance of it in the kitchen

**Objectives**
Apply purchasing, receiving, and storage strategies using key steps such as FIFO

**Objectives**
Design a daily, weekly, monthly, and yearly cleaning schedule

**Objectives**
Develop a pest control plan for the facility on quarterly time frame

**Objectives**
Complete a daily temperature log of prepared foods

## CUL112 - Nutrition for Foodservice

### Overview

**Course Description**
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.

### Credit Hours

3

**Course Typically Offered**
Spring

### Student Learning Outcomes

**Objectives**
Identification of common dietary preferences and intolerances

**Objectives**
Plan and Implement allergy free meals

**Objectives**
Demonstrate Healthy cooking techniques

**Objectives**
Apply contemporary presentation to healthy food preparation

**Objectives**
Judge the value of nutrient dense food

**Objectives**
Develop a personal food philosophy

**Objectives**
Identify connections between food choices and health status

**Objectives**
Compare and Contrast labels of unhealthy food choices and nutritious food choices, including industry terms for ingredients

## CUL112A - Nutrition for Foodservice Lab

### Overview

**Course Description**
This course provides a laboratory experience for enhancing student skills in the principles of nutrition and its relationship to the foodservice industry. Emphasis is placed on 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.

### Credit Hours

1

**Course Typically Offered**
Spring

### Requisites

**Simple Requisites**

**State concurrent or previous courses**
**Type**
Corequisite

Take CUL-112

Take CUL-112(S10923);

### Student Learning Outcomes

**Objectives**
Identification of common dietary preferences and intolerances

**Objectives**
Plan and Implement allergy free meals

**Objectives**
Demonstrate Healthy cooking techniques

**Objectives**
Apply contemporary presentation to healthy food preparation

**Objectives**
Judge the value of nutrient dense food

**Objectives**
Develop a personal food philosophy

**Objectives**
Identify connections between food choices and health status

**Objectives**
Compare and Contrast labels of unhealthy food choices and nutritious food choices, including industry terms for ingredients

## CUL120 - Purchasing

### Overview

**Course Description**
This course covers purchasing for foodservice operations. Emphasis is placed on yield tests, procurement, negotiating, inventory control, product specification, purchasing ethics, vendor relationships, food product specifications and software applications. Upon completion, students should be able to apply effective purchasing techniques based on the end-use of the product.

### Credit Hours

2

**Course Typically Offered**
Fall, Spring

### Student Learning Outcomes

**Objectives**
List the basic steps in the purchasing process, along with the impacts of effective purchasing.

**Objectives**
Classify the internal and external factors that impact the purchasing process.

**Objectives**
Compare and contrast the use of ready to eat products over in house made.

**Objectives**
State the procedures helpful in forecasting product needs.

**Objectives**
Identify how to make vendor selection decisions.

**Objectives**
Describe alternative purchasing sources.

**Objectives**
Explain the flow of products that are purchased for use in multiunit organizations.

**Objectives**
Explain how technology can impact the ordering process.

**Objectives**
Summarize the importance of professional vendor relations.

**Objectives**
Summarize the basic requirements for effective product receiving.

## CUL135 - Food and Beverage Service

### Overview

**Course Description**
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.

### Credit Hours
2

**Course Typically Offered**
Spring

### Student Learning Outcomes

**Objectives**
Use proper Proper Food Service ticket writing skills and implement those skills in the cafe

**Objectives**
Identify proper table manners and table etiquette and demonstrate those foundational techniques

**Objectives**
Explain and Demonstrate Basic Fine Dining procedures such as Utensils, Glassware, Plating, and Napkins

**Objectives**
Explain and Demonstrate how to properly present each course during a fine dining experience

**Objectives**
Examine food and beverage pairings

**Objectives**
Review and Summarize Hospitality and how they are implemented in hotels, caterings,and kitchen F.O.H

**Objectives**
Implement Food and Beverage Cost Control

**Objectives**
8Identify types of menus that are specific to F.O.H training.

**Objectives**
Examine BEO's from other F.O.H establishments and Design one specific to your class project

**Objectives**
Demonstrate Table Services

## CUL140 - Culinary Skills I

### Overview

**Course Description**
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.

### Credit Hours
5

**Course Typically Offered**
Fall

### Requisites

**Simple Requisites**

**State concurrent or previous courses**
**Type**
Corequisite

Take CUL-110

Take CUL-110(S22835);

### Student Learning Outcomes

**Objectives**
Exhibit safe practices such as personal hygiene, cross-contamination and food temperature

**Objectives**
Demonstrate proper and safe knife skills including basic cuts and knife care

**Objectives**
Classify food products and identify different recipe ingredients and in storage

**Objectives**
Demonstrate proper use, cleaning and care of smallwares and equipment

**Objectives**
Exhibit proper cooking methods and techniques by properly executing lab recipe

**Objectives**
Complete daily mise en place with ingredients, equipment and tools

**Objectives**
Interpret standardized recipes and design/construct personal recipes

**Objectives**
Identify proper measuring tools and techniques for liquid vs. dry

**Objectives**
Complete kitchen math with recipe conversion projects

**Objectives**
Exhibit kitchen professionalism through language, dress and conduct

# CUL140A - Culinary Skills I Lab

## Overview

**Course Description**
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.

## Credit Hours

1

**Course Typically Offered**
Fall

## Requisites

**Simple Requisites**

**State concurrent or previous courses**

**Type**
Corequisite

Take CUL-110 and CUL-140

Take CUL-110(S11030) CUL-140(S12163);

## Student Learning Outcomes

**Objectives**
Exhibit safe practices such as personal hygiene, cross-contamination and food temperature

**Objectives**
Demonstrate proper and safe knife skills including basic cuts and knife care

**Objectives**
Classify food products and identify different recipe ingredients and in storage

**Objectives**
Demonstrate proper use, cleaning and care of smallwares and equipment

**Objectives**
Exhibit proper cooking methods and techniques by properly executing lab recipe

**Objectives**
Complete daily mise en place with ingredients, equipment and tools

**Objectives**
Interpret standardized recipes and design/construct personal recipes

**Objectives**
Identify proper measuring tools and techniques for liquid vs. dry

**Objectives**
Complete kitchen math with recipe conversion projects

**Objectives**
Exhibit kitchen professionalism through language, dress and conduct

## CUL160 - Baking I

### Overview

**Course Description**
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.

### Credit Hours

3

**Course Typically Offered**
Spring

### Requisites

**Simple Requisites**

**State concurrent or previous courses**
**Type**
Corequisite

Take CUL-110

Take CUL-110(S22835);

### Student Learning Outcomes

**Objectives**
Identify Flours and how to properly use them in recipes

**Objectives**
Distinguish the use proper use of measurements such as weight vs. volume

**Objectives**
Demonstrate how to properly use Baking Equipment

**Objectives**
Demonstrate how to properly construct cake and the properties such as Icing, garnishes, and fillings

**Objectives**
Understand Bakeshop math and food safety

**Objectives**
Understand and Demonstrate how to make foundational quickbreads, soft doughs, and desserts

**Objectives**
Differentiate and Identify how to properly use leavening agents and yeasts

**Objectives**
Identify composition of foundational baking ingredients such as butter, eggs, diary, wheat

## CUL165 - Therapeutic Cuisine

### Overview

**Course Description**
This course covers the principles of therapeutic cooking with an emphasis on gluten free, allergy free, and vegan cooking. Topics include vegan, lacto-ovo, vegetarian, nut-free, dairy-free, wheat-free, soy-free, and corn-free meal preparation. Upon completion, students should be able to demonstrate an understanding of common dietary preferences and intolerances, and be able to safely and accurately execute allergy-free meal plan preparation.

### Credit Hours

3

**Course Typically Offered**
Fall

### Requisites

**Simple Requisites**

**State concurrent or previous courses**
**Type**
Prerequisite

Take All: CUL-110 and CUL-140

Take CUL-110(S22835) CUL-140(S22844);

### Student Learning Outcomes

**Objectives**
Define the basic components of whole foods nutrition and a holistic lifestyle model.

**Objectives**
Classify key words/theories such as: holism/holistic, balance, therapeutic cooking, diet vs. dietary approach, quality ingredients, food politics.

**Objectives**
Examine, implement and individualize a whole foods diet program.

**Objectives**
Design menus for special diets and/or health conditions

**Objectives**
Recall knowledge of cooking techniques and methods related to health based cuisine

**Objectives**
Develop personal food and lifestyle related goals in the form of journaling

**Objectives**
Apply basic nutritional concepts as they relate to health and well-being; foundations of healthy cooking

**Objectives**
Demonstrate alternate baking skills by using alternative flours, fats and dairy

**Objectives**
Revise recipes to incorporate healthier ingredients . Identify healthy proteins, fats and carbohydrates

**Objectives**
Identify essential vitamins and minerals for a healthy diet

# CUL170 - Garde Manger I

## Overview

**Course Description**
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.

## Credit Hours
3

**Course Typically Offered**
SPring

## Requisites

**Simple Requisites**

**State concurrent or previous courses**
**Type**
Corequisite

Take CUL-110

Take CUL-110(S22835);

## Student Learning Outcomes

**Objectives**
Identify food products that comprise the cold kitchen

**Objectives**
Demonstrate the ability to compose plates of charcuterie in an informed manner

**Objectives**
Produce presentation of cold foods utilizing carve fruits and vegetables safely and attractively

**Objectives**
Produce different types of dressings for salads composed of a variety of foods

**Objectives**
Implement appropriate cooking techniques to produce soups, pates, cheeses, jams, and jellies

**Objectives**
Demonstrate ability to produce commonly purchased condiments: mayonnaises, jams, jellies, dressings, spreads

**Objectives**
Distinguish between the different types of salads and sandwiches

**Objectives**
Identify and display cheeses

**Objectives**
Design and execute buffet tables, utilizing knowledge of flow and product placement

**Objectives**
Construct forcemeats and utilize in a variety of products such as sausages and pates

## CUL240 - Culinary Skills II

### Overview

**Course Description**
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.

### Credit Hours

5

**Course Typically Offered**
Fall

### Requisites

**Simple Requisites**

**State prerequisite**
**Type**
Prerequisite

Take one set: Set 1: CUL-110 and CUL-140 Set 2: CUL-110, CUL-142, and CUL-170

Take 1 group; # Take CUL-110(S22835) CUL-140(S22844); # Take CUL-110(S22835) CUL-142(S22845) CUL-170(S22849);

### Student Learning Outcomes

**Objectives**
Identify proteins and how to store, fabricate and cook

**Objectives**
Identify fruits and how to store and cook

**Objectives**
Identify vegetables and how to store and cook

**Objectives**
Identify legumes and how to store and cook

**Objectives**
Distinguish the difference between dairy products, how to store and use in cooking

**Objectives**
Recall and reproduce mother sauces and compound sauces

**Objectives**
Demonstrate ability to produce foundational desserts such as doughs, breads, and cookies

**Objectives**
Identify and respond to basic dietary issues such as portion size, allergies and dietary restrictions

**Objectives**
Compose a well designed plate including color, height and texture

**Objectives**
Execute kitchen skills in a real time service such as urgency, communication, and cooking skills

## CUL240A - Culinary Skills II Lab

### Overview

**Course Description**
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.

### Credit Hours

1

**Course Typically Offered**
Fall

## Requisites

**Simple Requisites**

**State prerequisite**
**Type**
Prerequisite

Take All: CUL-110 and CUL-140

Take CUL-110(S22835) CUL-140(S22844);

**State concurrent or previous courses**
**Type**
Corequisite

Take CUL-240

Take CUL-240(S13191);

## Student Learning Outcomes

**Objectives**
Identify proteins and how to store, fabricate and cook

**Objectives**
Identify fruits and how to store and cook

**Objectives**
Identify vegetables and how to store and cook

**Objectives**
Identify legumes and how to store and cook

**Objectives**
Distinguish the difference between dairy products, how to store and use in cooking

**Objectives**
Recall and reproduce mother sauces and compound sauces

**Objectives**
Demonstrate ability to produce foundational desserts such as doughs, breads, and cookies

**Objectives**
Identify and respond to basic dietary issues such as portion size, allergies and dietary restrictions

**Objectives**
Compose a well designed plate including color, height and texture

**Objectives**
Execute kitchen skills in a real time service such as urgency, communication, and cooking skills

# CUL260 - Baking II

## Overview

**Course Description**
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.

## Credit Hours

3

## Requisites

**Simple Requisites**

**State prerequisite**
**Type**
Prerequisite

Take All: CUL-110 and CUL-160

Take CUL-110(S22835) CUL-160(S22847);

# CUL270 - Garde Manger II

## Overview

**Course Description**
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.

## Credit Hours

3

### Requisites

**Simple Requisites**

**State prerequisite**
**Type**
Prerequisite

Take All: CUL-110, CUL-140, and CUL-170

Take CUL-110(S22835) CUL-140(S22844) CUL-170(S22849);

## CUL275 - Catering Cuisine

### Overview

**Course Description**
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.

### Credit Hours

5

**Course Typically Offered**
Spring, Summer

### Requisites

**Simple Requisites**

**State prerequisite**
**Type**
Prerequisite

Take All: CUL-110, CUL-140, and CUL-240

Take CUL-110(S22835) CUL-140(S22844) CUL-240(S22853);

### Student Learning Outcomes

**Objectives**
Develop Business Plan for Your Catering Business

**Objectives**
Develop Business Plan for Your Food Truck Business

**Objectives**
Propose and Build Catering Menu

**Objectives**
Implement Recipes Costing in your menu that you are building

**Objectives**
Organize and Examine the specific needs for Event Planning

**Objectives**
Invent a marketing plan that uses social media platforms to market your business

**Objectives**
Build your brand and concept for your Food Truck

**Objectives**
Design your Business Logo

**Objectives**
Develop Employee Schedule and list/ name certified hub kitchens

**Objectives**
Review Capstone Project which will include Business plans, and Presentation of both your Catering Business and Food truck business

## CUL283 - Farm-To-Table

### Overview

**Course Description**
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.

### Credit Hours

5

**Course Typically Offered**
Spring

### Requisites

**Simple Requisites**

**State prerequisite**
**Type**
Prerequisite

Take All: CUL-110 and CUL-140

Take CUL-110(S11030) CUL-140(S12163);

## Student Learning Outcomes

**Objectives**
Define sustainability and state its impact on restaurant industry

**Objectives**
Identify and apple cooking techniques and seasonal products

**Objectives**
Identify local farms and demonstrate use of local products

**Objectives**
Compare and Contrast quality and price of local product to conventional product

**Objectives**
State environmental impact of sustainability and its effect on cuisine

**Objectives**
Develop a meal using seasonal and local products: including converted recipes, and local/seasonal products

**Objectives**
Design a written menu and accompany meal

**Objectives**
Demonstrate execution of meals including, fabrication of meats, cooking methods, knife skills, safety and sanitation

**Objectives**
Configure a purchase order and apply purcharce/storage skills

**Objectives**
Design menu plate with portion size, color, texture and height

# DBA110 - Database Concepts

## Overview

**Course Description**
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.

## Credit Hours

3

**Course Typically Offered**
Fall, Spring

## Student Learning Outcomes

**Objectives**
Utilize normalization and data integrity.

**Objectives**
Create simple tables, queries, reports and forms.

**Objectives**
Explain data modeling and the entity-relationship model.

**Objectives**
Describe a quality database design.

**Objectives**
Advanced report and form techniques a. Create tables. b. Create queries. b. Create queries. c. Create reports. d. Create forms.

# DBA120 - Database Programming I

## Overview

**Course Description**
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.

## Credit Hours

3

**Course Typically Offered**
Spring

### Student Learning Outcomes

**Objectives**
Issue SQL commands to retrieve data based on criteria specified by the user.

**Objectives**
Issue SQL commands to join multiple tables and retrieve data from the joined tables.

**Objectives**
Perform calculations based on data contained within the database.

**Objectives**
Use sub-queries to retrieve data based on unknown conditions that exist within the database.

**Objectives**
Insert, update and delete data stored in database tables.

**Objectives**
Create, modify, and drop database tables.

**Objectives**
Enforce business rules through the use of table constraints.

**Objectives**
Create printable reports through various SQL commands.

## DDF211 - Design Process I

### Overview

**Course Description**
This course emphasizes design processes for finished products. Topics include data collection from manuals and handbooks, efficient use of materials, design sketching, specifications, and vendor selection. Upon completion, students should be able to research and plan the design process for a finished product.

### Credit Hours

4

**Course Typically Offered**
Spring, Summer

### Requisites

**Simple Requisites**

**Local Corequisite**
**Type**
Corequisite

DFT-153 or DFT-154

Take DFT-153(S20643) or DFT-154(S20664);

### Student Learning Outcomes

**Objectives**
Analyze design criteria and develop a solution

**Objectives**
Create technical documentation for a design project

**Objectives**
Estimate cost of the final design

## DDF212 - Design Process II

### Overview

**Course Description**
This course stresses the integration of various design practices. Emphasis is placed on the creation of an original design. Upon completion, students should be able to apply engineering graphics and design procedures to a design project.

### Credit Hours

4

**Course Typically Offered**
Fall

### Requisites

**Simple Requisites**

**State prerequisite**
**Type**
Prerequisite

Take DDF-211

Take DDF-211(S10112);

### Student Learning Outcomes

**Objectives**
Understand and apply the basic procedures for design

**Objectives**
Analyze design criteria, develop a solution, and iterate the solution

**Objectives**
Create technical documentation for a design project

**Objectives**
Estimate a cost analysis of the final design

## DDT110 - Intellectual & Developmental Disabilities

### Overview

**Course Description**
This course covers intellectual and developmental disabilities. Emphasis is placed on causes of intellectual/developmental disabilities, service provision and advocacy. Upon completion, students should be able to demonstrate a general knowledge of serving individuals with intellectual/developmental disabilities.

### Credit Hours

3

**Course Typically Offered**
Fall

## DDT120 - Direct Service Skills

### Overview

**Course Description**
This course covers teaching modalities which enhance learning among people with intellectual/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.

### Credit Hours

3

## DDT220 - Individualized Service Planning

### Overview

**Course Description**
This course covers individual program planning used in services for people with intellectual and developmental disabilities. Topics include basic components of service planning, outcomes, and integration of services. Upon completion, students should be able to develop and evaluate service plans.

### Credit Hours

3

## DDT230 - Supported Employment

### Overview

**Course Description**
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.

### Credit Hours

3

## DEN100 - Basic Orofacial Anatomy

### Overview

**Course Description**
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.

### Credit Hours

2

**Course Typically Offered**
Fall

### Student Learning Outcomes

**Objectives**
Describe extraoral and intraoral structures.

**Objectives**
Compare the most common numbering systems for deciduous and permanent teeth.

**Objectives**
Differentiate internal and external morphology on the deciduous and permanent dentition using standard oral anatomy terminology.

**Objectives**
Describe variations in occlusion.

**Objectives**
Name surrounding structures and describe their locations.

**Objectives**
Discuss histology and embryology as it pertains to basic tooth and facial development.

**Objectives**
Describe the specific muscles in the head and neck.

**Objectives**
Discuss major nervous and vascular supply of the face and oral cavity.

## DEN101 - Preclinical Procedures

### Overview

**Course Description**
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.

### Credit Hours

7

**Course Typically Offered**
Fall

### Student Learning Outcomes

**Objectives**
Describe dental health team members with regard to educational requirements, dental organizations and professional roles in the dental office.

**Objectives**
Discuss, identify, operate and maintain dental operatory equipment.

**Objectives**
State and apply the principles to team dentistry.

**Objectives**
Explain and apply the principles of dental patient assessment and management.

**Objectives**
Describe and demonstrate the principles of instrument transfer.

**Objectives**
Describe and implement infection control techniques.

**Objectives**
Recall and demonstrate the techniques and procedures necessary to maintain a clean, dry working field.

**Objectives**
Describe and demonstrate skills in assisting with the armamentarium, materials and procedures associated with operative dentistry and dental specialties.

**Objectives**
Describe the rationale for treatment planning.

**Objectives**
Accurately record conditions found in the oral cavity using the appropriate charting symbols.

## DEN102 - Dental Materials

### Overview

**Course Description**
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.

### Credit Hours

4

**Course Typically Offered**
Fall

### Student Learning Outcomes

**Objectives**
Identify and distinguish the dental materials presented in a lecture and lab.

**Objectives**
Describe and identify the common types and normal uses for each kind of dental material.

**Objectives**
Explain and list the properties and composition of each dental material.

**Objectives**
Demonstrate the recommended technique for preparation and use of each dental material.

**Objectives**
Indicate the effects of variations in techniques on the properties of each dental material.

**Objectives**
Demonstrate and identify the current expanded functions within the scope of Dental Assisting practice for the State of North Carolina.

# DEN103 - Dental Sciences

## Overview

**Course Description**
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.

## Credit Hours

2

**Course Typically Offered**
Spring

## Student Learning Outcomes

**Objectives**
Explain the significance of vital signs and the health history as an aide in preventing office emergencies.

**Objectives**
Discuss the role of the dental assistant and other dental team members during an office emergency.

**Objectives**
Explain vasodepressor syncope in terms of its causes, physiology, prevention, signs/symptoms and treatment.

**Objectives**
Recognize airway obstruction and identify its causes physiology, prevention, signs/symptoms and treatment.

**Objectives**
Discuss asthma in term of its causes, physiology, prevention, signs/symptoms, and treatment.

**Objectives**
Explain hyperventilation in terms of its causes, physiology, prevention, signs/symptoms and treatment.

**Objectives**
Discuss epilepsy in terms of its terms of its causes, physiology, prevention, signs/symptoms and treatment.

**Objectives**
Discuss diabetes mellitus in terms of its causes, physiology, prevention, signs/symptoms and treatment.

**Objectives**
Recognize allergic reactions and identify certain causes, physiological aspects, prevention, signs/symptoms and treatment.

**Objectives**
Discuss angina pectoris and myocardial infarction in terms of its causes, physiology, prevention, signs/symptoms and treatment.

**Objectives**
Explain dental pharmacology in relation to common terminology, classification of drugs, controlled substances, sources of drug information, and methods of drug administration.

**Objectives**
Explain the purpose of a prescription including: parts of a prescription, Latin words and abbreviations, and units of measurement.

**Objectives**
Define Oral Pathology.

**Objectives**
Recognize obvious conditions of the head and neck which deviate from normal.

**Objectives**
Define basic pathology principles.

**Objectives**
Explain the inflammatory response, repair of infections, and immunity.

**Objectives**
Discuss some common oral developmental abnormalities.

**Objectives**
Explain dental caries and pulpal disorders.

**Objectives**
Discuss common diseases of soft tissues, neoplasms, and periodontium.

# DEN104 - Dental Health Education

## Overview

**Course Description**
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.

## Credit Hours

3

**Course Typically Offered**
Spring

## Student Learning Outcomes

**Objectives**
Lecture:

**Objectives**
Community Dental Health Education: (Gagliardi Ch.1)

**Objectives**
Identify who is involved in creating a dental health program

**Objectives**
Explain the factors that influence intrinsic behaviors

**Objectives**
Describe multicultural issues in dental health

**Objectives**
Define dental health programs

**Objectives**
Describe the importance of a dental health program.

**Objectives**
Oral Hygiene Instructions/Patient Education: (Bird Ch. 15, Gagliardi Section 4, Wilkins Ch. 28 & 29)

**Objectives**
Define oral physiotherapy aids.

**Objectives**
State the objectives of plaque control and the most effective ways to control plaque.

**Objectives**
Discuss the types of disclosing agents available and explain the advantages of using them.

**Objectives**
Discuss various other aids and devices and their function in oral physiotherapy.

**Objectives**
Describe various types of toothpastes and explain the indications and contraindications of each.

**Objectives**
Describe the various types of mouth rinses available and explain the indications and contraindications of each.

**Objectives**
List the goal and objectives for an initial, periodic, and emergency exam.

**Objectives**
Fluoride: (Bird Ch. 15, Gagliardi Ch. 7)

**Objectives**
Discuss the history of fluoride.

**Objectives**
Identify the benefits of fluoride to oral health.

**Objectives**
Describe the differences and effects of systemic and topical fluoride.

**Objectives**
Discuss fluoride toxicity.

**Objectives**
Identify the optimal level of water fluoridation.

**Objectives**
List the various sources of fluoride.

**Objectives**
Discuss the supplemental dosage schedule

**Objectives**
Describe treatment guidelines for topical fluoride.

**Objectives**
Plaque Index and Control: (Bird Ch. 15)

**Objectives**
Demonstrate the recognition of plaque on teeth.

**Objectives**
Explain and demonstrate how to calculate a plaque index.

**Objectives**
Describe how to incorporate the plaque index into oral hygiene instructions.

**Objectives**
Nutrition and Preventive Dentistry: (Bird Ch. 16, Gagliardi Ch. 8)

**Objectives**
State the difference between nutrition and diet.

**Objectives**
Explain the difference between good nutrition and malnutrition.

**Objectives**
Describe how nutrients work together.

**Objectives**
Discuss the role of digestion, absorption and metabolism in how the body utilizes nutrients.

**Objectives**
Describe the food pyramid and recommended servings per group.

**Objectives**
List the key nutrients, their functions, sources and some significant deficiencies related to each.

**Objectives**
Discuss nutritional disorders that may be of concern when providing nutritional education to the dental patient.

**Objectives**
Explain the relationship between sucrose, plaque formation and caries susceptibility and periodontal disease.

**Objectives**
Explain the cariogenic nature of foods based on their retentive nature.

**Objectives**
Explain the cariogenic nature of foods based on their frequency at which they are eaten.

**Objectives**
Discuss how food choices influence the prevention of dental disease.

**Objectives**
Conduct a dietary analysis on a patient.

**Objectives**
Define liquid and soft diets and list foods from each group included in the diet.

**Objectives**
Describe dietary modifications required by dental patients for the following: cosmetic dentistry, injured anterior teeth, orthodontic requirements, ANUG, Pre/Post oral surgery, new denture wearer, etc.

**Objectives**
Community In-service/Lesson Plans: (Gagliardi Chapter 2, Section 4)

**Objectives**
Discuss why we create lesson plans.

**Objectives**
Create an effective lesson plan for a classroom.

**Objectives**
Plan and implement a community project

**Objectives**
Describe how to create an effective community outreach program.

**Objectives**
Tobacco Cessation: (Gagliardi Ch. 11, Wilkins Ch 32)

**Objectives**
List the different forms of tobacco.

**Objectives**
Explain the importance of tobacco cessation as it relates to oral health.

**Objectives**
Describe the effects of tobacco on oral and overall health.

**Objectives**
Discuss the environmental effects of tobacco.

**Objectives**
Describe oral manifestations of tobacco use.

**Objectives**
List pharmacotherapies available for tobacco cessation.

**Objectives**
List the 5 “A’s” of a tobacco cessation program.

**Objectives**
Oral Health Education for Special Needs/Medically Compromised Patients: (Gagliardi Ch. 14, 15, 16, Bird Ch. 29, Wilkins Section IX)

**Objectives**
Describe educational alterations for children and adults with special needs

**Objectives**
Identify adaptive methods for brushing and flossing for patients with special needs

**Objectives**
Identify various medical conditions and the treatment considerations

**Objectives**
Oral Cancer: (Bird Ch. 17)

**Objectives**
Explain why oral pathology is important for the dental assistant.

**Objectives**
Describe types of oral lesions.

**Objectives**
Describe warning symptoms of oral cancer.

**Objectives**
Describe the appearance of lesions associated with the use of smokeless tobacco

**Objectives**
Discuss the procedure for follow up of a suspicious lesion

**Objectives**
Identify different technologies that are available for oral cancer screening

**Objectives**
Periodontal Disease & Acute Periodontal Conditions (Bird Ch. 14, Wilkins Ch. 18-20)

**Objectives**
Describe the periodontium

**Objectives**
Discuss the periodontal examination

**Objectives**
Identify causes and risk factors of periodontal disease

**Objectives**
Identify a case patient's severity of periodontal disease

**Objectives**
Recognize types of necrotizing periodontal diseases

**Objectives**
Describe the treatment of periodontal disease & conditions

**Objectives**
Intraoral Photography & Intraoral Camera (Supplemental materials/ handouts)

**Objectives**
Discuss application for use of intra oral photography

**Objectives**
Photograph and mount an intraoral photography series

**Objectives**
Describe uses for the intraoral camera

**Objectives**
Caries Process & Risk Assessment (Bird Ch. 13, Wilkins Ch. 25)

**Objectives**
Explain the dental caries process

**Objectives**
Describe the causes and risk factors for dental caries

**Objectives**
Explain the importance of saliva related to dental caries

**Objectives**
Explain the goal of CAMBRA

**Objectives**
List the protocol for remineralization

**Objectives**
Lab:

**Objectives**
Demonstrate the difference between tooth brushing techniques.

**Objectives**
Demonstrate giving oral hygiene instructions to include: a. Choosing and demonstrating an appropriate brushing technique b. Choosing an appropriate oral physiotherapy aid c. Choosing and demonstrating appropriate flossing technique

**Objectives**
Demonstrate how to calculate a plaque index

**Objectives**
Plan and implement a community project

**Objectives**
Demonstrate proper infection control with intraoral photography

**Objectives**
Conduct dietary analysis on a patient

**Objectives**
Photograph specific areas in the oral cavity with the (intraoral) camera

**Objectives**
Role play providing tobacco cessation using motivational interviewing skills

**Objectives**
Debate the pros and cons of fluoride use

**Objectives**
Zoom Presentations

**Objectives**
Caries risk assessment

# DEN105 - Practice Management

## Overview

**Course Description**
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.

## Credit Hours

2

**Course Typically Offered**
Spring, Summer

## Student Learning Outcomes

**Objectives**
Demonstrate the ability to relate efficient management of the dental practice and recognize examples of good and bad business management techniques and their probable effects on the practice.

**Objectives**
Prepare and maintain patient records, both electronically and manually, in the Dental Healthcare Setting.

**Objectives**
Prepare and maintain financial records, both electronically and manually, in the Dental Healthcare Setting.

**Objectives**
Maintain appointment and recall systems, both electronically and manually, in the Dental Healthcare Setting.

**Objectives**
Maintain supply and inventory systems, both electronically and manually, in the Dental Healthcare Setting.

**Objectives**
Demonstrate the ability in usage of the ADA Code on Dental Procedures and Nomenclature and the Code of Dental Terminology manual.

**Objectives**
Demonstrate how to effectively communicate among dental team members and patients daily in the dental practice with oral, written, and electronic telecommunications.

# DEN106 - Clinical Practice I

## Overview

**Course Description**
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.

## Credit Hours

6

**Course Typically Offered**
Spring

## Requisites

**Simple Requisites**

**State prerequisite**
**Type**
Prerequisite

Take DEN-101

Take DEN-101(S20496);

## Student Learning Outcomes

**Objectives**
Experience working under the direct supervision of the dentist and/or staff.

**Objectives**
Apply basic theory and competencies learned to actual office practices.

**Objectives**
Demonstrate professional behavior and dress.

**Objectives**
Experience performing business office management procedures.

**Objectives**
Interpret the NC Dental Practice Act as it applies to Dental Assistants.

**Objectives**
Prepare the operatory and patient for treatment utilizing correct infection control procedures.

**Objectives**
Assist with diagnostic procedures, restorative and specialty procedures, and preventive procedures.

**Objectives**
Assume radiographic responsibilities.

**Objectives**
Recognize signs and symptoms of medical/dental emergencies and assist in administering appropriate care.

**Objectives**
Operate and maintain all dental equipment.

# DEN107 - Clinical Practice II

## Overview

**Course Description**
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.

## Credit Hours

5

**Course Typically Offered**
Summer

## Requisites

**Simple Requisites**

**State prerequisite**
**Type**
Prerequisite

Take DEN-106

Take DEN-106(S14145);

## Student Learning Outcomes

**Objectives**
Experience working under the direct supervision of the dentist and/or staff.

**Objectives**
Apply basic theory and competencies learned to actual office practices.

**Objectives**
Demonstrate professional behavior and dress.

**Objectives**
Experience performing business office management procedures.

**Objectives**
Interpret the NC Dental Practice Act as it applies to Dental Assistants.

**Objectives**
Prepare the operatory and patient for treatment utilizing correct infection control procedures.

**Objectives**
Assist with diagnostic procedures, restorative and specialty procedures, and preventive procedures.

**Objectives**
Assume radiographic responsibilities.

**Objectives**
Recognize signs and symptoms of medical/dental emergencies and assist in administering appropriate care.

**Objectives**
Operate and maintain all dental equipment.

# DEN110 - Orofacial Anatomy

## Overview

**Course Description**
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.

## Credit Hours

3

**Course Typically Offered**
Fall

## Student Learning Outcomes

**Objectives**
Lecture:

**Objectives**
Describe extraoral and intraoral structures.

**Objectives**
Compare the most common numbering systems for deciduous and permanent teeth.

**Objectives**
Differentiate internal and external morphology on the deciduous and permanent dentition using standard oral anatomy terminology.

**Objectives**
Describe variations in occlusion.

**Objectives**
Name surrounding structures and describe their locations.

**Objectives**
Discuss histology as it pertains to basic tooth and facial development.

**Objectives**
Describe the locations of the bones and related landmarks of the head and neck.

**Objectives**
Discuss the specific muscles in the head and neck.

**Objectives**
Discuss major nervous, vascular and lymphatic supply of the face and oral cavity.

**Objectives**
Discuss local anesthetic as it pertains to the landmarks and their corresponding affects.

**Objectives**
Laboratory:

**Objectives**
Locate and identify extraoral and intraoral structures.

**Objectives**
Use the most common numbering systems for deciduous and permanent teeth.

**Objectives**
Locate and identify internal and external morphology on the deciduous and permanent dentition using standard oral anatomy terminology.

**Objectives**
Compare variations in occlusion.

**Objectives**
Locate and identify surrounding structures.

**Objectives**
Identify and locate the bones and related landmarks of the head and neck.

**Objectives**
Identify and locate specific muscles in the head and neck.

**Objectives**
Differentiate major nervous, vascular and lymphatic supply of the face and oral cavity.

**Objectives**
Identity and locate nerves and associated foramen in preparation for local anesthetic injections.

# DEN111 - Infection/Hazard Control

## Overview

**Course Description**
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.

## Credit Hours

2

**Course Typically Offered**
Fall, Spring

## Student Learning Outcomes

**Objectives**
Discuss the basic principles of microbiology.

**Objectives**
Recognize and classify microorganisms as they relate to the human body.

**Objectives**
Define and/or match terms with definitions used in microbiology.

**Objectives**
Identify microbial life forms from given descriptions.

**Objectives**
Explain various modes of disease transmission.

**Objectives**
Identify the various methods of sterilization.

**Objectives**
Identify the various methods of disinfection

**Objectives**
Describe proper methods used in the care of, storage, and handling of instruments.

**Objectives**
Identify/Describe Bacterial Diseases.

**Objectives**
Identify/Describe Viral Diseases.

**Objectives**
Identify various preventive measures/ universal precautions to follow in order to reduce the risk of disease transmission.

**Objectives**
Define Epidemiology and explain its relation to the transmission of disease.

**Objectives**
Discuss the effects that infectious diseases have on/in the human body.

**Objectives**
Identify the CDC's classification of instruments as it relates to sterilization/disinfection.

**Objectives**
Identify OSHA's Bloodborne Pathogens Standards/TB Draft Standard as they relate to the Exposure Control Plans/Universal Precautions in the health care environment.

**Objectives**
Recognize/explain/identify NC Dept. Of DEHNR's regulations/CDC guidelines for infection control procedures/Healthcare Personnel and Patient Monitoring and surveillance.

**Objectives**
Explain the role of the FDA and EPA in infection control procedures.

**Objectives**
Explain the importance of various types of personal protective equipment.

**Objectives**
Identify various types of personal protective equipment.

**Objectives**
Describe the proper placement and removal of personal protective equipment.

**Objectives**
Define exposure control/universal precautions/infection control procedures.

**Objectives**
Identify the preventive measures that must be utilized as determined by OSHA, CDC, EPA, FDA, other health care organizations, and the NC State Dept. Of Environment, Health, & Natural Resources.

**Objectives**
Identify/Recognize warning labels and symbols used according to OSHA's Bloodborne Pathogens Standard.

**Objectives**
Discuss the importance/reasons for using warning labels and signs as they relate to the Bloodborne Pathogens Standard.

**Objectives**
Describe the importance of the OSHA's Hazardous Communications Standard and watch for continual changes with the standard.

**Objectives**
Recognize hazardous chemicals/ symbols.

**Objectives**
Describe the types of protective equipment to wear; safety measure to follow; handling of chemicals; and proper storage of hazardous chemicals.

**Objectives**
Explain the function of the material safety data sheets.

**Objectives**
Identify, the MSDS sheet.

**Objectives**
Identify the information found on/in the MSDS sheet.

# DEN112 - Dental Radiography

## Overview

**Course Description**
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.

## Credit Hours

3

**Course Typically Offered**
Fall, Spring

## Student Learning Outcomes

**Objectives**
Lecture:

**Objectives**
List and describe basic principles of radiation production and quality.

**Objectives**
Discuss factors of x-ray production and dental sensors as related to diagnostically acceptable radiographs.

**Objectives**
Discuss the composition, size, speed, and uses of dental radiographic sensors.

**Objectives**
State guidelines for exposing dental radiographs.

**Objectives**
Describe the set-up, armamentarium, and proper utilization of sensor processing.

**Objectives**
Describe the biological effects of radiation exposure.

**Objectives**
Discuss the exposure and utilization of extraoral radiography.

**Objectives**
Discuss the rationale, methods, and law for protecting the patient and operator from ionizing radiation.

**Objectives**
Laboratory:

**Objectives**
Using a variety of techniques, make diagnostically acceptable radiographic surveys while meeting current legal requirements for radiation safety.

**Objectives**
Maintain the treatment area, SCANX room, and each component of the armamentarium.

**Objectives**
Process, mount, and evaluate radiographic surveys to determine diagnostic acceptability.

**Objectives**
Demonstrate proper patient management and aseptic technique during the radiographic procedure.

**Objectives**
Evaluate radiographs for errors in exposure and/or processing and corrective procedures.

**Objectives**
Demonstrate knowledge of anatomical landmarks and radiographic interpretation.

**Objectives**
Comply with clinic rules pertaining to safety, asepsis, and radiation protection.

# DEN120 - Dental Hygiene Preclinic Lecture

## Overview

**Course Description**
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.

## Credit Hours

2

**Course Typically Offered**
Fall

## Requisites

**Simple Requisites**

**State concurrent or previous courses**
**Type**
Corequisite

Take DEN-121

Take DEN-121;

## Student Learning Outcomes

**Objectives**
Demonstrate professionalism in class through ethical behavior, punctuality, interest and participation.

**Objectives**
Exercise punctuality with class attendance and completion of assignments.

**Objectives**
Demonstrate respect to peers and faculty in all interactions.

**Objectives**
Demonstrate skills for patient reception and ergonomic practices for the dental hygienist.

**Objectives**
Discuss the roles, functions and responsibilities encompassing the profession of dental hygiene.

**Objectives**
Analyze and discuss the American Dental Hygienists' Association's Principles of Ethics.

**Objectives**
Explain proper infection and exposure control protocol in the clinical setting.

**Objectives**
Explain disease transmission processes and intervention methods for patient care.

**Objectives**
Describe appropriate patient/operator positioning for patient care.

**Objectives**
Assess at patient thoroughly and accurately to include: a. Medical/ dental history b. Vital signs c. Drug referencing d. Extraoral/intraoral examination e. Gingival description f. Dental/periodontal charting g. Bleeding and plaque control record

**Objectives**
Describe the techniques used for grasps and finger rests.

**Objectives**
Explain effective use of the mirror and compressed air for patient examination and treatment.

**Objectives**
Explain detection and removal techniques for soft deposits on the teeth.

**Objectives**
Identify appropriate oral physiotherapy aids based on patient needs and effectively educate patients in their use.

**Objectives**
Explain use of dental explorers for detection of hard deposits and tooth anatomy.

**Objectives**
Discuss the etiology of caries and techniques used in caries detection.

**Objectives**
Explain techniques for removal of hard deposits from the teeth and dental implants using area specific curettes, universal curettes and sickle scalers.

**Objectives**
Explain appropriate technique for sharpening sickle scalers, universal curettes, and area specific curettes.

**Objectives**
Define scaling, root planning and periodontal debridement.

**Objectives**
Describe the assessment of tooth mobility and furcation involvement.

**Objectives**
Describe the process of treatment planning and implementation.

**Objectives**
Explain the protocol and technique for polishing teeth and using dental floss.

**Objectives**
Discuss the protocol, rationale and contraindications for applying topical fluoride.

**Objectives**
Present a patient case to include appropriate assessment strategies, clinical findings and treatment interventions.

**Objectives**
Complete a peer patient utilizing all course goals and objectives including a dental hygiene care plan.

## DEN121 - Dental Hygiene Preclinical Lab

### Overview

**Course Description**
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.

## Credit Hours
2

**Course Typically Offered**
Fall

## Requisites
**Simple Requisites**

**State concurrent or previous courses**
**Type**
Corequisite

Take DEN-120

Take DEN-120;

## Student Learning Outcomes

**Objectives**
Locate and operate dental equipment

**Objectives**
Demonstrate correct infection control protocol.

**Objectives**
Position the patient, operator, and light for treatment

**Objectives**
Perform a thorough and accurate assessment phase of care including: a. medical/dental history b. vital signs/ drug referencing c. extraoral/intraoral examination d. gingival description e. dental/periodontal charting f. bleeding and plaque indices

**Objectives**
Demonstrate effective use of the mirror and compressed air during patient examination and treatment.

**Objectives**
Detect, identify and remove soft deposits from the teeth using the indicated technique.

**Objectives**
Identify appropriate oral physiotherapy aids for each patient and effectively educate patient in their use.

**Objectives**
Demonstrate the correct technique to complete an intra-extra-oral examination

**Objectives**
Demonstrate the correct technique for use of explorers for detection of hard deposits, caries, and tooth anatomy.

**Objectives**
Demonstrate the correct technique for use of the periodontal probe, PSR probe, and Nabor's probe.

**Objectives**
Detect and remove hard deposits from the teeth using area specific curets, universal curets, and sickle scalers.

**Objectives**
Assess and remove extrinsic stain with accepted stain removal technique.

# DEN123 - Nutrition/Dental Health

## Overview
**Course Description**
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.

## Credit Hours
2

**Course Typically Offered**
Spring

## Student Learning Outcomes

**Objectives**
Indicate six classes of nutrients and their importance to oral health.

**Objectives**
Determine the nutritional content of specific food using the Food Label.

**Objectives**
Discuss the role of protein, lipids, and carbohydrates have on oral health.

**Objectives**
Explain basal metabolism and the various energy needs of an individual.

**Objectives**
Discuss the effects of foods on oral health.

**Objectives**
Determine how vitamins and minerals affect oral health.

**Objectives**
Explain how proper nutrition is important for children, periodontal clients, female considerations, medically compromised and the elderly.

**Objectives**
Identify different cultures in the local population for the purpose of promoting oral health and an understanding of disease activity.

**Objectives**
Recognize the need to treatment plan according to state of health of the individual.

# DEN124 - Periodontology

## Overview

**Course Description**
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.

## Credit Hours

2

**Course Typically Offered**
Spring

## Requisites

**Simple Requisites**

**State prerequisite**
**Type**
Prerequisite

Take DEN-110

Take DEN-110;

## Student Learning Outcomes

**Objectives**
Describe the anatomical structures of the periodontium and describe their histological features and relationships.

**Objectives**
Describe changes in histological and anatomical features in response to functional demands placed on the periodontium.

**Objectives**
Describe the AAP classification of periodontal disease.

**Objectives**
Describe the potential pathogenic mechanisms of plaque bacteria in inflammatory periodontal disease.

**Objectives**
Discuss the systemic and local factors that influence the occurrence and progression of periodontal disease.

**Objectives**
Describe the different stages of periodontal disease.

**Objectives**
Describe the steps involved in a complete assessment of periodontal disease.

**Objectives**
Discuss the use and treatment of dental implants including types of implants and dental hygiene care of implant patients.

**Objectives**
Evaluate the components necessary for the diagnosis of periodontal disease.

**Objectives**
Recognize the significance and clinical indications for surgical, non-surgical and maintenance therapies.

**Objectives**
Apply evidence-based approach to periodontal care.

**Objectives**
Demonstrate the ability to analyze a radiograph for periodontal disease.

# DEN125 - Dental Office Emergencies

## Overview

**Course Description**
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.

## Credit Hours

1

**Course Typically Offered**
Summer

## Student Learning Outcomes

**Objectives**
Discuss the general considerations

**Objectives**
List/evaluate predisposing factors

**Objectives**
Discuss/demonstrate possible prevention strategies

**Objectives**
Generate related dental therapy considerations and modify accordingly

**Objectives**
Describe / effectively evaluate clinical manifestations

# DEN130 - Dental Hygiene Theory I

## Overview

**Course Description**
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.

## Credit Hours

2

**Course Typically Offered**
Spring

## Requisites

**Simple Requisites**

**State prerequisite**
**Type**
Prerequisite

Take DEN-120

Take DEN-120;

**State concurrent or previous courses**
**Type**
Corequisite

Take DEN-131

Take DEN-131;

## Student Learning Outcomes

**Objectives**
Discuss Preventive Counseling and Behavior Change for Patient Care

**Objectives**
Determine Oral Hygiene needs regarding toothbrushes and toothbrushing

**Objectives**
Learn and demonstrate interdental care

**Objectives**
Recognize and determine the need for dentifrices and mouthrinses

**Objectives**
Understand and learn fluoride patient and community needs

**Objectives**
Determine the prevention and protocol for control of Dental Caries

**Objectives**
Understand the care and needs for patients with Orthodontics Appliances

**Objectives**
Understand and determine the needs for the Patient with Dental Prosthesis and Implants

**Objectives**
Identify the needs for the patient with nicotine disorders and assess the patient to determine the dental hygiene care plan necessary for treatment

**Objectives**
Demonstrate Instrument sharpening and appropriate care for dental instruments

**Objectives**
Discuss the different options for whitening and tooth bleaching options

# DEN131 - Dental Hygiene Clinic I

## Overview

**Course Description**
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.

## Credit Hours

3

**Course Typically Offered**
Spring

## Requisites

**Simple Requisites**

**State prerequisite**
**Type**
Prerequisite

Take DEN-121

Take DEN-121;

**State concurrent or previous courses**
**Type**
Corequisite

Take DEN-130

Take DEN-130;

## Student Learning Outcomes

**Objectives**
Utilize appropriate aseptic techniques in the preparation and performance of all clinical procedures.

**Objectives**
Obtain/review, record, update and interpret a personal, medical, and dental history for each patient appointment.

**Objectives**
Apply information obtained in didactic classes in observing and examining the oral conditions of each patient observations demonstrated in the oral examination for each patient.

**Objectives**
Examine the dentition and chart findings accurately.

**Objectives**
Apply information obtained in periodontics and DEN 124 when assessing the periodontal structures and document findings accurately.

**Objectives**
Recognize the potential for emergency situations and respond appropriately.

**Objectives**
Recognize conditions in which a radiographic examination is necessary.

**Objectives**
Recognize medical and dental findings that may require further consultation and review and seek appropriate consultation.

**Objectives**
Incorporate preventive care planning in rendering care to patients as it relates to overall dental needs, as discussed in all previous and current coursework.

**Objectives**
Educate patients regarding their present oral health status.

**Objectives**
Educate and communicate clearly with each patient in methods of home care specific to his/her oral needs.

**Objectives**
Position the patient, self and equipment to attain maximum visibility and accessibility for examination and treatment.

**Objectives**
Select appropriate instruments for each procedure according to principles and design and function and nature of deposits.

**Objectives**
Analyze and evaluate individual strengths and weaknesses in skill development.

**Objectives**
Demonstrate and assess the effectiveness of instrumentation in producing a tooth surface that can maintain health.

**Objectives**
Demonstrate and assess the ability to perform selective polishing procedures for stain and plaque removal.

**Objectives**
Select and apply appropriate topical fluoride and/or recommend appropriate home-use fluoride products.

**Objectives**
Provide fundamental dental hygiene services involving the selection, manipulation, and care of specific dental materials.

**Objectives**
Maintain effectively sharpened instruments.

**Objectives**
Recognize the need for, and implement the CCCC tobacco cessation program with selected patients.

**Objectives**
Exhibit the use of appropriate professional communication with others including patients, faculty, staff, and peers.

**Objectives**
Exhibit appropriate professional behavior in all clinical experiences and assigned rotations.

**Objectives**
Involve and inform the patient in all aspects of decision-making, treatment planning and implementing care.

**Objectives**
Utilize evidence-based patient management skills in the assessment, planning, treatment of all patients in order to provide comprehensive effective patient care

# DEN140 - Dental Hygiene Theory II

## Overview

**Course Description**
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, radiographic abnormalities, and be certified in the administration of local anesthesia.

## Credit Hours

2

**Course Typically Offered**
Summer

## Requisites

**Simple Requisites**

**State prerequisite**
**Type**
Prerequisite

Take DEN-130

Take DEN-130;

**State concurrent or previous courses**
**Type**
Corequisite

Take DEN-141

Take DEN-141;

## Student Learning Outcomes

**Objectives**
Demonstrate and apply the principles of Ultrasonic use during clinical practice.

**Objectives**
Determine, apply, and administer local anesthetics as needed for dental hygiene care

**Objectives**
Understand and apply the necessary treatment for Pain Control in patient care.

**Objectives**
Learn and apply the principles of Intraoral Photography

**Objectives**
Identify and apply the principles of radiographic interpretation of periodontal disease, trauma, pulpal lesions, periapical lesions, restorations, dental materials, foreign objects, and dental caries.

**Objectives**
Understand how to care for the patient with dentin hypersensitivity.

# DEN141 - Dental Hygiene Clinic II

## Overview

**Course Description**
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.

## Credit Hours

2

**Course Typically Offered**
Summer

## Requisites

**Simple Requisites**

**State prerequisite**
**Type**
Prerequisite

Take DEN-131

Take DEN-131;

**State concurrent or previous courses**
**Type**
Corequisite

Take DEN-140

Take DEN-140(S14315);

## Student Learning Outcomes

**Objectives**
Utilize appropriate aseptic techniques in the preparation and performance of all clinical procedures.

**Objectives**
Obtain/review, record, update and interpret a personal, medical, and dental history for each patient appointment.

**Objectives**
Apply information obtained in oral pathology and periodontics in observing and examining the oral conditions of each patient observations demonstrated in the oral examination for each patient.

**Objectives**
Examine the dentition and chart findings accurately.

**Objectives**
Apply information obtained in periodontics and DEN 124 when assessing the periodontal structures and document findings accurately.

**Objectives**
Recognize the potential for emergency situations and respond appropriately.

**Objectives**
Recognize conditions in which a radiographic examination is necessary.

**Objectives**
Recognize medical and dental findings that may require further consultation and review and seek appropriate consultation.

**Objectives**
Incorporate preventive care planning in rendering care to patients as it relates to overall dental needs, as discussed in all previous and current coursework.

**Objectives**
Educate patients regarding their present oral health status.

**Objectives**
Educate and communicate clearly with each patient in methods of home care specific to his/her oral needs.

**Objectives**
Position the patient, self and equipment to attain maximum visibility and accessibility for examination and treatment.

**Objectives**
Select appropriate instruments for each procedure according to principles and design and function and nature of deposits.

**Objectives**
Analyze and evaluate individual strengths and weaknesses in skill development.

**Objectives**
Demonstrate and assess the effectiveness of instrumentation in producing a tooth surface that can maintain health.

**Objectives**
Demonstrate and assess the ability to perform selective polishing procedures for stain and plaque removal.

**Objectives**
Select and apply appropriate topical fluoride and/or recommend appropriate home use fluoride products.

**Objectives**
Provide fundamental dental hygiene services involving the selection, manipulation, and care of specific dental materials.

**Objectives**
Maintain effectively sharpened instruments.

**Objectives**
Recognize the need for, and implement the CCCC tobacco cessation program with selected patients.

**Objectives**
Exhibit the use of appropriate professional communication with others including patients, faculty, staff, and peers.

**Objectives**
Exhibit appropriate professional behavior in all clinical experiences and assigned rotations.

# DEN220 - Dental Hygiene Theory III

## Overview

**Course Description**
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.

## Credit Hours

2

**Course Typically Offered**
Fall

## Requisites

**Simple Requisites**

**State prerequisite**
**Type**
Prerequisite

Take DEN-140

Take DEN-140(S14315);

**State concurrent or previous courses**
**Type**
Corequisite

Take DEN-221

Take DEN-221;

## Student Learning Outcomes

**Objectives**
Explain and describe advanced and specialized clinical techniques: a. probing b. advanced instruments c. air polishing d. root instrumentation

**Objectives**
Determine and recognize when advanced techniques should be utilized.

**Objectives**
Explain hypersensitivity factors.

**Objectives**
Distinguish treatment modalities for hypersensitivity characteristics.

**Objectives**
Recognize and discuss various modifications types for patients with special needs.

**Objectives**
Explain the various medications used for infectious disease and how they might influence dental treatment.

**Objectives**
Identify barriers to communication and how to effectively express strategies for change.

**Objectives**
Describe oral conditions related to various medication therapies.

**Objectives**
Understand and explain the need for advanced treatment planning and case presentations.

# DEN221 - Dental Hygiene Clinic III

## Overview

**Course Description**
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.

## Credit Hours

4

**Course Typically Offered**
Fall

## Requisites

**Simple Requisites**

**State prerequisite**
**Type**
Prerequisite

Take DEN-141

Take DEN-141;

**State concurrent or previous courses**
**Type**
Corequisite

Take DEN-220

Take DEN-220(S11191);

## Student Learning Outcomes

**Objectives**
Utilize appropriate aseptic techniques in the preparation and performance of all clinical procedures.

**Objectives**
Obtain/review, record, update and interpret a personal, medical, and dental history for each patient appointment.

**Objectives**
Apply information obtained in oral pathology and periodontics in observing and examining the oral conditions of each patient.

**Objectives**
Examine the dentition and chart findings accurately.

**Objectives**
Apply information obtained in periodontics and DEN 124 when assessing the periodontal structures and document findings accurately.

**Objectives**
Recognize the potential for emergency situations and respond appropriately.

**Objectives**
Recognize conditions in which a radiographic examination is necessary.

**Objectives**
Recognize medical and dental findings that may require further consultation and review and seek appropriate consultation.

**Objectives**
Incorporate preventive care planning in rendering care to patients as it relates to overall dental needs, as discussed in all previous and current coursework.

**Objectives**
Educate patients regarding their present oral health status.

**Objectives**
Using information gathered from the patient's oral and periodontal evaluation, educate and communicate clearly with each patient the methods of home care specific to his/her oral needs.

**Objectives**
Position the patient, self and equipment to attain maximum visibility and accessibility for examination and treatment.

**Objectives**
Use proper ergonomics and indirect vision while performing dental hygiene procedures.

**Objectives**
Select appropriate instruments for each procedure according to the principles of design, function and nature of deposits.

**Objectives**
Analyze and evaluate individual strengths and weaknesses in skill development.

**Objectives**
Demonstrate and assess the effectiveness of instrumentation in producing a tooth surface that can maintain health.

**Objectives**
Demonstrate and assess the ability to perform selective polishing procedures for stain and plaque removal.

**Objectives**
Select and apply appropriate topical fluoride and/or recommend appropriate home-use fluoride products.

**Objectives**
Provide fundamental dental hygiene services involving the selection, manipulation, and care of specific dental materials.

**Objectives**
Maintain effectively sharpened instruments.

**Objectives**
Recognize the need for, and implement the CCCC tobacco cessation program with selected patients.

**Objectives**
Exhibit the use of appropriate professional communication with others including patients, faculty, staff, and peers.

**Objectives**
Exhibit appropriate professional behavior in all clinical experiences and assigned rotations.

**Objectives**
Identify and utilize resources to determine the most effective solution in given situation.

**Objectives**
Self-evaluate radiographs for technique errors and anatomic landmarks, and discuss with faculty.

**Objectives**
Apply principles of nutrition to recognize the need for and perform diet analysis and diet counseling.

**Objectives**
Identify the need for a medical consult and coordinate with medical professions to develop comprehensive treatment plans.

**Objectives**
Select special needs patient and develop appropriate treatment plan.

# DEN222 - General & Oral Pathology

## Overview

**Course Description**
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.

## Credit Hours
2

**Course Typically Offered**
Fall

## Requisites
**Simple Requisites**

**State prerequisite**
**Type**
Prerequisite

Take One: BIO-163, BIO-165, or BIO-168

Take BIO-163 BIO-165 or BIO-168(S11555);

## Student Learning Outcomes

**Objectives**
Define Pathology and Oral Pathology.

**Objectives**
Recognize and describe various normal oral pathologies.

**Objectives**
Describe the microscopic events and clinical signs of inflammation.

**Objectives**
Recognize injuries to the teeth and oral soft tissues.

**Objectives**
Describe the immune response and recognize oral diseases with immunologic pathogenesis.

**Objectives**
Discuss and recognize clinically the various infectious diseases that cause bacterial, fungal, and viral infections.

**Objectives**
Explain the various developmental disorders that cause oral abnormalities.

**Objectives**
Describe the correlation between genetics and various pathologies.

**Objectives**
List and describe various neoplastic and non-neoplastic diseases.

**Objectives**
Recognize the oral manifestations clinically caused by systemic diseases.

**Objectives**
Describe the diseases affecting the temporomandibular joint (TMD).

# DEN223 - Dental Pharmacology

## Overview
**Course Description**
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.

## Credit Hours
2

**Course Typically Offered**
Spring

## Requisites
**Simple Requisites**

**State concurrent or previous courses**
**Type**
Corequisite

Take One: BIO-163, BIO-165, or BIO-168

Take BIO-163 BIO-165 or BIO-168(S11555);

## Student Learning Outcomes

**Objectives**
Explain and describe the general principles of pharmacology.

**Objectives**
Determine and recognize various drug actions.

**Objectives**
Understand regulatory agencies and drug legislation

**Objectives**
Recognize which medications affect the autonomic system.

**Objectives**
Distinguish between non-opioid analgesics and opioid analgesics.

**Objectives**
Define and recognize the uses of various antimicrobial, antifungal and antiviral agents.

**Objectives**
Explain the various medications used for infectious disease and how they might influence dental treatment.

**Objectives**
Distinguish among the various sedative hypnotic medications and their potential uses in dentistry.

**Objectives**
Describe oral conditions related to various medication therapies.

**Objectives**
List and explain the dental concerns associated with cardiovascular disease.

**Objectives**
Recognize the overall management of seizure disorder and the related dental concerns.

**Objectives**
Describe the effects of psychiatric drugs on a patient.

**Objectives**
Describe the pharmacologic effects and clinical uses of antihistamines.

**Objectives**
Describe the relationship between the various adrenocortical steroids and other hormones.

**Objectives**
Explain the dental concerns of local anesthetics and cardiovascular disease.

**Objectives**
Discuss antineoplastic pharmacology, gastrointestinal disorders, respiratory disorders, diabetes mellitus, pregnancy, and pediatric concerns.

**Objectives**
Understand use of emergency drugs for special situations.

**Objectives**
Discuss drug abuse and its potential effects on patients and the dental community.

**Objectives**
Recognize natural/herbal products and dietary supplements and their potential effects and interaction with various prescription drugs.

**Objectives**
Discuss the various drug interactions and their effects on dental treatment.

**Objectives**
Explain the ethical responsibility of pharmacology in the dental practice and the confidentiality of patients.

## DEN224 - Materials and Procedures

### Overview

**Course Description**
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.

## Credit Hours
2

**Course Typically Offered**
Spring

## Requisites
**Simple Requisites**

**State prerequisite**
**Type**
Prerequisite

Take DEN-111

Take DEN-111;

## Student Learning Outcomes

**Objectives**
Identify and distinguish the dental materials presented in a lecture and lab.

**Objectives**
Describe and identify the common types and normal uses for each kind of dental material.

**Objectives**
Explain and list the properties and composition of each dental material.

**Objectives**
Demonstrate the recommended technique for preparation and use of each dental material.

**Objectives**
Indicate the effects of variations in techniques on the properties of each dental material.

**Objectives**
Demonstrate and identify the current expanded functions within the scope of Dental Hygiene practice for the State of North Carolina.

# DEN230 - Dental Hygiene Theory IV

## Overview
**Course Description**
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.

## Credit Hours
1

**Course Typically Offered**
Spring

## Requisites
**Simple Requisites**

**State prerequisite**
**Type**
Prerequisite

Take DEN-220

Take DEN-220(S11191);

**State concurrent or previous courses**
**Type**
Corequisite

Take DEN-231

Take DEN-231;

## Student Learning Outcomes

**Objectives**
Have a working knowledge of the dental specialties.

**Objectives**
Differentiate between new diagnostic technologies and new therapeutic technologies in the dental hygiene profession.

**Objectives**
Recognize when to refer and the importance of timely referrals to different specialties.

**Objectives**
Identify case specifics based on patient presentation and findings to determine dental hygiene treatment and diagnosis.

# DEN231 - Dental Hygiene Clinic IV

## Overview

**Course Description**
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.

## Credit Hours

4

**Course Typically Offered**
Spring

## Requisites

**Simple Requisites**

**State prerequisite**
**Type**
Prerequisite

Take DEN-221

Take DEN-221;

**State concurrent or previous courses**
**Type**
Corequisite

Take DEN-230

Take DEN-230(S12882);

## Student Learning Outcomes

**Objectives**
Utilize resources appropriately to assist in problem identification and decision-making.

**Objectives**
Critically assess strengths and weaknesses.

**Objectives**
Develop goals and determine a plan of action to achieve each goal.

**Objectives**
Identify and utilize resources to determine the most effective solution in a given situation.

**Objectives**
Utilize appropriate aseptic techniques and professional attire in preparation and performance of clinical procedures.

**Objectives**
Obtain, record, and interpret a personal, medical, and dental history for each patient seen.

**Objectives**
Apply information obtained in the basic and dental science courses in examining and interpreting observations in the oral inspection for each patient.

**Objectives**
Examine the teeth and supporting structures and chart findings

**Objectives**
Recognize conditions for emergency situations and prepare appropriately.

**Objectives**
Recognize conditions which may indicate the need for radiographic examination.

**Objectives**
Self-evaluate radiographs for technique errors and anatomic landmarks, and discuss with faculty.

**Objectives**
Verbally, logically, and concisely report significant findings from radiographs to faculty and the patient.

**Objectives**
Recognize those findings obtained in data collection that may require further consultation; review, and seek appropriate approval from course director.

**Objectives**
Utilize all information obtained in data collection for preventative treatment planning.

**Objectives**
Inform patients of their present oral health status.

**Objectives**
Facilitate each patient in methods of homecare which are specific to his/her oral needs.

**Objectives**
Apply principles of nutrition to recognize the need for and perform diet analysis and diet counseling.

**Objectives**
Incorporate pit and fissure sealants into the treatment plans for patients which would benefit from the service.

**Objectives**
Recognize the symptoms of dental hypersensitivity, and incorporate into the treatment plan an appropriate desensitizing technique.

**Objectives**
Recognize the need for and incorporate intraoral photography on patients.

**Objectives**
Involve and inform the patient in all aspects of decision-making, treatment planning, and implementing care.

**Objectives**
Assess success of treatment in meeting short and long-term goals.

**Objectives**
Utilize evidence based patient management skills in the assessment, planning, treatment, and re-evaluation of non-surgical periodontal therapy to all patients in order to provide comprehensive effective patient care.

# DEN232 - Community Dental Health

## Overview

**Course Description**
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.

## Credit Hours

3

**Course Typically Offered**
Fall

## Student Learning Outcomes

**Objectives**
Lecture:

**Objectives**
Understand the evolution of dental hygiene as a dental public health science.

**Objectives**
Define the roles of the dental hygienist within a community setting.

**Objectives**
Describe the differences of the current oral health care delivery systems in the United States and International countries.

**Objectives**
Understand the major problems/ concerns with current oral health care delivery systems.

**Objectives**
Identify effective preventative measures when applied to community based dental programs.

**Objectives**
Evaluate science research and how to use this information to improve the oral health of the community.

**Objectives**
Differentiate between the different methods of payment of dental care.

**Objectives**
Define dental health education and promotion.

**Objectives**
Describe the difference between inter- and intra-professional collaborations.

**Objectives**
Identify and describe dental public health careers.

**Objectives**
Laboratory:

**Objectives**
Practice as a dental hygienist within a community setting.

**Objectives**
Identify the needs of a target population.

**Objectives**
Demonstrate skills and knowledge in various subject areas as they relate to community-based needs.

**Objectives**
Gather and analyze data.

**Objectives**
Use appropriate measurement types to assess, plan, implement, and evaluate a community-based dental health program.

**Objectives**
Establish channels to promote interdisciplinary collaboration.

**Objectives**
Understand how fluoride plays an integral role in community water fluoridation.

# DEN233 - Professional Development

## Overview

**Course Description**
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.

## Credit Hours

2

**Course Typically Offered**
Spring

## Student Learning Outcomes

**Objectives**
Determine how the concepts of ethics and professionalism relate to one another

**Objectives**
Discover how ethical theory, philosophy, principles, and value affects professional life

**Objectives**
Identify the professional Codes of Ethics and what they mean to professional practice

**Objectives**
Understand the responsibilities of a professional health care provider to society

**Objectives**
Understand ethical decision making when faced with ethical dilemmas

**Objectives**
Learn the laws, rules, and regulations that govern the practice of dental hygiene

**Objectives**
Learn the specific laws for North Carolina as it pertains to the practice of dental hygiene

**Objectives**
Understand the legal framework for the relationships of patients in the practice of dental hygiene

**Objectives**
Understand the legal framework for the relationship with the dentist/ employer in the practice of dental hygiene

**Objectives**
Understand risk management in the practice of dentistry and dental hygiene

**Objectives**
Be able to build a professional portfolio to include a professional resume and professional employment interview

# DFT151 - CAD I

## Overview

**Course Description**
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.

## Credit Hours

3

**Course Typically Offered**
Spring

## Student Learning Outcomes

**Objectives**
Analyze a drafting problem and complete a drawing

**Objectives**
Use basic CAD commands

**Objectives**
Be able to produce and plot a CAD drawing

# DFT152 - CAD II

## Overview

**Course Description**
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.

## Credit Hours

3

**Course Typically Offered**
Fall

## Requisites

**Simple Requisites**

**Prerequisite**
**Type**
Prerequisite

Take DFT-151;

## Student Learning Outcomes

**Objectives**
Analyze a drafting problem and complete a drawing

**Objectives**
Use basic CAD commands

**Objectives**
Properly dimension a drawing with appropriate units and tolerances

**Objectives**
Be able to produce and plot a CAD drawing

# DFT153 - CAD III

## Overview

**Course Description**
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.

## Credit Hours

3

**Course Typically Offered**
Spring

## Requisites

**Simple Requisites**

**Local Prereq**
**Type**
Prerequisite

DFT-254

Take DFT-254;

## Student Learning Outcomes

**Objectives**
Use advanced CAD applications to generate and manage data 2. Input file metadata.

**Objectives**
Produce accurate part and assembly drawings using data contained in part/assembly custom properties.

**Objectives**
Create SolidWorks macros.

**Objectives**
Use PDM software to track design changes.

# DFT154 - Introduction to Solid Modeling

## Overview

**Course Description**
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.

## Credit Hours

3

**Course Typically Offered**
Fall

## Student Learning Outcomes

**Objectives**
Use basic 3D modeling software commands.

**Objectives**
Analyze a drafting problem and develop 3D part and assembly models.

**Objectives**
Create and edit multiview drawings using a 3D model.

**Objectives**
Properly dimension a drawing with appropriate units.

# DFT170 - Engineering Graphics

## Overview

**Course Description**
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.

## Credit Hours

3

**Course Typically Offered**
Fall, Spring

## Student Learning Outcomes

**Objectives**
Demonstrate engineering graphics through CAD

**Objectives**
Sketch engineering concepts

**Objectives**
Use engineering graphics to communicate an idea or design

**Objectives**
Construct engineering graphics in orthogonal view, auxiliary view, sections and isometric views

**Objectives**
Become familiar with Solidworks and as an engineering graphics tool

**Objectives**
Develop 3-D models of parts and assemblies

**Objectives**
Use dimensional information, including tolerance in engineering drawings

**Objectives**
Recognize hardware in engineering designs

**Objectives**
Distinguish between first- and third-angle projection.

# DFT254 - Intermediate Solid Modeling & Rendering

## Overview

**Course Description**
This course presents a continuation of basic three-dimensional solid modeling and design software. Topics include advanced study of parametric design, creation, editing, rendering and analysis of solid model assemblies, and multiview drawing generation. Upon completion, students should be able to use parametric design techniques to create and analyze the engineering design properties of a model assembly.

## Credit Hours
3

**Course Typically Offered**
Fall, Spring

## Requisites

**Simple Requisites**

**State prerequisite**
**Type**
Prerequisite

Take DFT-154

Take DFT-154(S20155);

# DRA111 - Theatre Appreciation

## Overview

**Course Description**
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.

## Credit Hours
3

**Course Typically Offered**
Fall, Spring, Summer

## Student Learning Outcomes

**Objectives**
Justify the relevance of theatre in historical and contemporary contexts

**Objectives**
Develop and use a vocabulary to examine theatre as an art

**Objectives**
Differentiate elements that comprise theatrical performances

**Objectives**
Analyze and critique live theatre productions

**Objectives**
Model effective audience etiquette

**Objectives**
Create a project illustrating one or more dimensions of theatre

## ECO151 - Survey of Economics

### Overview

**Course Description**
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.

### Credit Hours

3

**Course Typically Offered**
Fall, Spring

### Student Learning Outcomes

**Objectives**
Explain how incentives impact the decisions of people

**Objectives**
Demonstrate the importance of trade for economic progress

**Objectives**
Model supply and demand

**Objectives**
Discuss the economic role of private property rights

**Objectives**
Examine why some nations prosper and others stagnate

**Objectives**
Analyze how the political process addresses economic issues

**Objectives**
Outline the key components to sound personal finance

**Objectives**
Construct a personal budget

**Objectives**
Evaluate and compare investment options

## ECO251 - Principles of Microeconomics

### Overview

**Course Description**
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.

### Credit Hours

3

**Course Typically Offered**
Fall, Spring, Summer

### Student Learning Outcomes

**Objectives**
Explain the concept of scarcity

**Objectives**
Prove the economic benefits of trade

**Objectives**
Classify the components of a market

**Objectives**
Model and interpret demand

**Objectives**
Model and interpret supply

**Objectives**
Characterize a market in equilibrium

**Objectives**
Identify efficient market outcomes

**Objectives**
Distinguish between different types of markets

**Objectives**
Analyze the impact of government intervention in a market

**Objectives**
Calculate a firm's cost of production

**Objectives**
Determine the point at which a firm maximizes profit

## ECO252 - Principles of Macroeconomics

### Overview

**Course Description**
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.

### Credit Hours

3

**Course Typically Offered**
Fall, Spring, Summer

### Student Learning Outcomes

**Objectives**
Model supply and demand

**Objectives**
Describe the circular flow diagram of the economy

**Objectives**
Calculate and describe Gross Domestic Product

**Objectives**
Estimate and explain the rate of inflation

**Objectives**
Relate saving to investment within a financial system

**Objectives**
Classify stages within a business cycle

**Objectives**
Define and predict the impact of fiscal policy

**Objectives**
Define and predict the impact of monetary policy

**Objectives**
Analyze the impact of government intervention in the economy

## EDU119 - Introduction to Early Childhood Education

### Overview

**Course Description**
This course introduces the foundations of culturally responsive, equitable and inclusive early childhood education, planning intentional developmentally appropriate experiences, learning activities, and teaching strategies for indoor and outdoor environments for all young children, guidance techniques, and professionalism. 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, guidance techniques, and curriculum responsive to the needs of each child/family. Upon completion, students should be able to implement developmentally appropriate environments, guidance techniques, schedules, and teaching strategies across developmental domains to support culturally, linguistically, and ability diverse children and their families in inclusive settings, and design a personal career/professional development plan.

### Credit Hours

4

**Course Typically Offered**
Fall, Spring, Summer

### Student Learning Outcomes

**Objectives**
Identify effective tools that support learning for early education and development.

**Objectives**
Demonstrate developmental knowledge and appropriate practices to create healthy supportive and challenging learning environments, indoor and outdoor that meet the needs of diverse children and families.

**Objectives**
Design a career plan that reflects personal identification and involvement with the early childhood field.

## EDU131 - Child, Family, and Community

### Overview

**Course Description**
This course covers the development of partnerships among 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 and supporting respectful relationships between diverse families, programs/schools, and community agencies/resources reflective of the NAEYC Code of Ethical Conduct and the Code of Ethics for North Carolina Educators. Upon completion, students should be able to identify appropriate relationship building strategies between diverse families, children birth through adolescence, schools, and communities and demonstrate a variety of communication skills including appropriate use of technology to support every child.

### Credit Hours

3

**Course Typically Offered**
Fall, Spring

### Student Learning Outcomes

**Objectives**
Recognize the characteristics of diverse families and communities within the cultural context.

**Objectives**
Demonstrate evidenced-based strategies and techniques to involve families and communities in children's development and learning.

**Objectives**
Apply evidenced-based strategies to build respectful, reciprocal family, teacher and community partnerships.

## EDU144 - Child Development I

### Overview

**Course Description**
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.

### Credit Hours

3

**Course Typically Offered**
Fall, Spring

### Student Learning Outcomes

**Objectives**
Utilize observation and assessment to compare and contrast characteristics of typical and atypical development in each domain from conception to 36 months.

**Objectives**
Explain ways in which biological and environmental factors influence children's development and learning from conception to 36 months.

**Objectives**
Identify evidence-based, developmentally appropriate experiences, interaction techniques and environments that are sensitive to and meet the individual needs of each child from conception to 36 months.

## EDU145 - Child Development II

### Overview

**Course Description**
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.

### Credit Hours
3

**Course Typically Offered**
Fall, Spring

### Student Learning Outcomes

**Objectives**
Utilize observation and assessment to compare and contrast characteristics of typical and atypical development in each domain from preschool through middle childhood.

**Objectives**
Explain ways in which biological and environmental factors influence children's development and learning from preschool through middle childhood.

**Objectives**
Identify evidence-based, developmentally appropriate experiences, interaction techniques and environments that are sensitive to and meet the individual needs of each child from preschool through middle childhood.

## EDU146 - Child Guidance

### Overview

**Course Description**
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.

### Credit Hours
3

**Course Typically Offered**
Fall, Spring

### Student Learning Outcomes

**Objectives**
Recognize the role of observation, assessment, and technology to promote positive outcomes for each child.

**Objectives**
Demonstrate an understanding of appropriate guidance strategies to promote positive and supportive interactions, including working with intensive behaviors.

## EDU151 - Creative Activities

### Overview

**Course Description**
This course introduces developmentally supportive, diverse, equitable, and inclusive creative learning environments with attention to divergent thinking, creative problem-solving, evidence-based teaching practices, and open-ended learning materials and activities that align with the NC Foundations for Early Learning and Development. Emphasis is placed on best practices providing process-driven culturally diverse, learning experiences in art, music, creative movement, dance, and dramatic play integrated across all domains and academic content in indoor/outdoor environments for every young child age birth through age eight. Upon completion, students should be able to observe, examine, create, adapt, and advocate for developmentally appropriate creative learning materials, experiences, and environments for children that are culturally, linguistically, and ability diverse.

### Credit Hours
3

**Course Typically Offered**
Fall, Spring

### Student Learning Outcomes

**Objectives**
Identify the characteristics of a developmentally appropriate indoor/outdoor creative environment for children that are culturally, linguistically, and ability diverse.

**Objectives**
Demonstrate various developmentally appropriate creative experiences to meet the needs of each child in a variety of domains and academic content.

# EDU153 - Health, Safety and Nutrition

## Overview

**Course Description**
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.

## Credit Hours

3

**Course Typically Offered**
Fall, Spring

## Student Learning Outcomes

**Objectives**
Apply health and safety principles, policies, procedures and state regulations that ensure developmentally appropriate health, safety and nutritional needs of young children in indoor/outdoor activities and environments.

**Objectives**
Describe the characteristics of child abuse and neglect and the procedures for reporting as defined by state regulations, while understanding the importance of upholding ethical standards.

# EDU158 - Healthy Lifestyles-Youth

## Overview

**Course Description**
This course covers maintaining the health and well-being of all school-age children. Topics include health, safety, nutrition, physical activities and environments that promote development, fitness, and healthy lifestyles. Upon completion, students should be able to plan developmentally appropriate, safe/healthy physical activities that support the healthy development of school-age children, be able to plan and identify healthy eating choices that support healthy development as well as design safety policies and procedures and environments that promote healthy lifestyles.

## Credit Hours

3

# EDU163 - Classroom Management and Instruction

## Overview

**Course Description**
This course examines classroom management and evidence-based instructional strategies that create supportive learning environments to provide culturally, linguistically and 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, student should be able to utilize developmentally appropriate behavior management, utilize high-quality instructional strategies that enhance the teaching/learning process and promote students' academic success.

## Credit Hours

3

**Course Typically Offered**
Fall

## Student Learning Outcomes

**Objectives**
Recognize environments that promote respect, positive interactions and appreciation for student and family diversity.

**Objectives**
Demonstrate appropriate behavioral expectations and classroom management/guidance techniques that support student differences including those who may be culturally, linguistically and/or ability diverse recognizing possible triggers and influences for challenging behaviors.

**Objectives**
Analyze, through observation, teaching strategies that support individual learning styles and student differences.

# EDU175 - Introduction to Trade and Industrial Education

## Overview

**Course Description**
This course introduces the philosophy, scope, and objectives of industrial education. Topics include the development of industrial education, employment opportunities, current events, current practices, and emerging trends. Upon completion, students should be able to describe the history, identify current practices, and describe current trends in industrial education.

## Credit Hours

3

# EDU177 - Instructional Methods

## Overview

**Course Description**
This course covers instructional methods in technical education with emphasis on competency-based instruction. Topics include writing objectives, industrial methods, and determining learning styles. Upon completion, students should be able to select and demonstrate the use of a variety of instructional methods.

## Credit Hours

3

# EDU179 - Vocational Student Organizations

## Overview

**Course Description**
This course covers planning and organizing vocational youth clubs by understanding the structure and operating procedures to use club activities for personal and professional growth. Topics include self-assessment to set goals, club structure, election and installation of officers, club activities, function of committees, running meetings, contest preparation, and leadership skills. Upon completion students should be able to set personal goals, outline club structure, elect and install officers.

## Credit Hours

3

# EDU187 - Teaching and Learning for All

## Overview

**Course Description**
This course introduces students to knowledge, concepts, and best practices needed to provide developmentally appropriate, effective, inclusive, and culturally responsive educational experiences in the classroom.

Topics include growth and development, learning theory, student motivation, teaching diverse learners, classroom management, inclusive environments, student-centered practices, instructional strategies, teaching methodologies, observation/assessment techniques, educational planning, reflective practice, collaboration, cultural competence, ethics, professionalism, and leadership.

Upon completion, students should be able to identify the knowledge, skills, roles, and responsibilities of an effective educator as defined by state and national professional teaching standards.

## Credit Hours

4

**Course Typically Offered**
Fall, Spring

## Student Learning Outcomes

**Objectives**
Apply developmental knowledge of learning theories and appropriate instructional strategies to create healthy, supportive, inclusive, and challenging learning environments, indoor and outdoor, that meet the needs of diverse children and families.

**Objectives**
Design a career plan that demonstrates leadership, ethical standards, and professional guidelines in the field of education through collaboration.

**Objectives**
Identify effective tools that support learning for student-centered learning and development as well as the knowledge, skills, roles, and responsibilities of an effective educator as defined by state and national professional teaching standards.

**Objectives**
Using observation and assessment tools, students will apply knowledge of developmentally appropriate practice in classroom management, and motivate learners to achieve academic success using a variety of teaching methodology.

**Objectives**
Describe stages of development and characteristic behaviors of school age students through various theories of learning in a diverse world.

# EDU216 - Foundations of Education

## Overview

**Course Description**
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.

## Credit Hours

3

**Course Typically Offered**
Fall, Spring

### Student Learning Outcomes

**Objectives**
Identify different paths including your own journey to becoming an education professional.

**Objectives**
Explore your own personal philosophy of education based on the historical and philosophical foundations of education.

**Objectives**
Explain the role of the federal government in public and private education, and how it relates to state and local government and school boards.

**Objectives**
Use classroom observations and research to analyze the different educational approaches, including classical/traditional and progressive.

## EDU221 - Children With Exceptionalities

### Overview

**Course Description**
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.

### Credit Hours

3

**Course Typically Offered**
Spring, Summer

### Requisites

**Simple Requisites**

**State prerequisite**
**Type**
Prerequisite

Take one set: Set 1: EDU-144 and EDU-145 Set 2: PSY-244 and PSY-245

Take 1 group; # Take EDU-144(S25341) EDU-145(S25342); # Take PSY-244(S12069) PSY-245(S11997);

### Student Learning Outcomes

**Objectives**
Differentiate instructional needs of children (i.e. adapt environment, curricula, etc.) with exceptionalities and diverse abilities using formative assessment.

**Objectives**
Examine the process and procedures to make referrals and transitions in collaboration with families and community partners.

**Objectives**
Analyze evidenced-based assessment tools to adapt environments and curricula that reflect diverse abilities of each child.

## EDU234 - Infants, Toddlers, and Twos

### Overview

**Course Description**
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.

### Credit Hours

3

**Course Typically Offered**
Fall, Spring

### Requisites

**Simple Requisites**

**State prerequisite**
**Type**
Prerequisite

Take EDU-119

Take EDU-119(S24238);

## Student Learning Outcomes

**Objectives**
Demonstrate responsive planning informed by formative and summative assessment for children birth to 36 months.

**Objectives**
Identify strategies to support responsive positive relationships and interactions with children and families that promote child development and learning.

**Objectives**
Design quality developmentally appropriate experiences aligned with NC Foundations for Early Learning and Development.

# EDU235 - School-Age Development and Programs

## Overview

**Course Description**
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.

## Credit Hours

3

## Student Learning Outcomes

**Objectives**
Identify strategies that promote positive relationships and community building among teachers, school-age children and their families.

**Objectives**
Identify community resources that support school-age children and their families.

**Objectives**
Apply knowledge of child development to foster physical, emotional, social and cognitive growth in all school-age children.

**Objectives**
Apply knowledge to plan appropriate programs for all school-age children that provide rich and varied learning activities for children ages 5-12, which invite exploration and experimentation.

# EDU250 - Teacher Licensure Preparation

## Overview

**Course Description**
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.

## Credit Hours

3

**Course Typically Offered**
Fall, Spring, Summer

## Requisites

**Simple Requisites**

**State prerequisite**
**Type**
Prerequisite

Take One Set: Set 1: ENG-111 and MAT-143 Set 2: ENG-111 and MAT-152 Set 3: ENG-111 and MAT-171

Take 1 group; # Take ENG-111(S25433) MAT-143(S24995); # Take ENG-111(S25433) MAT-152(S24996); # Take ENG-111(S25433) MAT-171(S25432);

## Student Learning Outcomes

**Objectives**
Describe the teacher licensure process in North Carolina.

**Objectives**
Discuss strategies for success as a university student including ethics, professionalism, and student teaching expectations.

**Objectives**
Prepare for the Praxis Core tests in Reading, Writing, and Math.

**Objectives**
Identify the portfolio assessment process including education terminology, engaging children, reflection components, and related costs.

## EDU252 - Math and Science Activities

### Overview

**Course Description**
This course introduces discovery experiences in math and science. Topics include concepts, facts, phenomena, and skills in each area. Upon completion, students should be able to identify, plan, select materials and equipment, and implement and evaluate developmentally appropriate curriculum materials.

### Credit Hours

3

**Course Typically Offered**
Fall, Spring, Summer

### Student Learning Outcomes

**Objectives**
Define the basic scientific and mathematical concepts.

**Objectives**
Implement exploration activities in math and science that help children construct their own understanding of scientific concepts.

**Objectives**
Design a complete integrated math and science environment, including games and activities that will integrate into other curriculum areas.

## EDU259 - Curriculum Planning

### Overview

**Course Description**
This course is designed to focus on using content knowledge to build effective developmentally appropriate approaches that are culturally responsive, equitable, and ability diverse for young children. Topics include components of curriculum, a variety of curriculum models, authentic observation and assessment, and planning developmentally appropriate experiences and indoor/outdoor environments aligned with the NC Foundations for Early Learning and Development. Upon completion, students should be able to understand, evaluate, and use developmentally appropriate curriculum to plan for the individual/group needs of young children.

### Credit Hours

3

**Course Typically Offered**
Fall, Spring

### Requisites

**Simple Requisites**

**State prerequisite**
**Type**
Prerequisite

Take EDU-119

Take EDU-119(S25916);

### Student Learning Outcomes

**Objectives**
Analyze a variety of curricula.

**Objectives**
Explain how to use observation and documentation to guide appropriate differentiated instruction.

**Objectives**
Design developmentally appropriate experiences for young children.

## EDU261 - Early Childhood Administration I

### Overview

**Course Description**
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.

**Course Typically Offered**
Fall, Spring

### Credit Hours
3

### Requisites
**Simple Requisites**

**State concurrent or previous courses**
**Type**
Corequisite

Take EDU-119

Take EDU-119(S24238);

### Student Learning Outcomes

**Objectives**
Demonstrate knowledge of NC Child Care Law and Rules.

**Objectives**
Examine comprehensive program policies.

**Objectives**
Evaluate basic components of a business plan and program budget.

## EDU262 - Early Childhood Administration II

### Overview
**Course Description**
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.

### Credit Hours
3

**Course Typically Offered**
Fall, Spring

### Requisites
**Simple Requisites**

**State prerequisite**
**Type**
Prerequisite

Take All: EDU-119 and EDU-261

Take EDU-119(S24238) EDU-261(S25391);

### Student Learning Outcomes

**Objectives**
Identify key indicators of quality programs and methods of evaluation.

**Objectives**
Evaluate personal qualifications and characteristics of leadership.

**Objectives**
Implement community needs and resources into the program.

## EDU263 - School-Age Program Administration

### Overview
**Course Description**
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.

### Credit Hours
2

## EDU270 - Effective Instructional Environments

### Overview
**Course Description**
This course is designed to provide learners with the knowledge and skills to create, manage, and assess effective instructional environments, learning attitudes, and behaviors for today's diverse learning population.

Topics include organizing the learning environment, fostering positive learning attitudes, supporting healthy stakeholder partnerships, engaging students using effective differentiated instruction, guiding, and managing student behaviors, and assessing student progress.

Upon completion of this course, learners will demonstrate effective dispositions of the professional educator that include managing schedules, spaces, and resources, promoting supportive learning mindsets, engaging students with diverse instructional strategies, guiding student behaviors to maximize both the instructional and social climate, and analyzing and effectively responding to student progress.

### Credit Hours
2

**Course Typically Offered**
Fall

### Student Learning Outcomes

**Objectives**
Design and implement instructional environments and schedules that effectively use space, resources, and transitions to support diverse learners and varied instructional strategies.

**Objectives**
Develop instructional lessons that apply multiple teaching modes, questioning techniques, and grouping strategies to address diverse student needs.

**Objectives**
Create and refine a comprehensive classroom management plan that fosters a positive learning climate and supports strong teacher-student, peer-peer, and teacher-family relationships.

**Objectives**
Use formative and summative assessment data to adapt instruction, provide targeted feedback, and implement interventions that promote student growth.

## EDU271 - Educational Technology

### Overview

**Course Description**
This course introduces the appropriate and ethical use of technology that is inclusive of digital and analog materials/tools to enhance teaching and learning in all educational settings. Emphasis is placed on the developmentally appropriate use of technology with children, ethical issues, digital citizenship, instructional strategies, assistive technology, and the use of technology for professional development and communication with families. Upon completion, student should be able to demonstrate professional and ethical implementation of various modes of technology in culturally responsive and equitable ways to support diverse children, families and communities.

### Credit Hours

3

**Course Typically Offered**
Fall, Spring

### Student Learning Outcomes

**Objectives**
Evaluate appropriate technological resources and content.

**Objectives**
Use a variety of technology strategies to enhance the classroom learning environment.

**Objectives**
Demonstrate the ethical use of technology in the early childhood profession.

## EDU272 - Technology, Data, and Assessment

### Overview

**Course Description**
This course is designed to provide students with the knowledge and skills to utilize digital instructional technologies and technology-based assessments to plan and implement appropriate educational experiences and interventions in the classroom. Topics include educational technology to enhance instruction, instructional technologies for teaching, technology-based assessment, formative and summative assessments, data to inform practice, and ethical practices for technology and assessment. Upon completion, students will be able to demonstrate effective integration of educational technology into classroom practice, appropriate use of technology-based assessments, and practical application of data to inform educational planning and interventions.

### Credit Hours

3

## EDU277 - Integrated Curriculum and Instructional Strategies: Math/Science

### Overview

**Course Description**
This course is designed to provide learners with the content knowledge, instructional methods/materials, and assessment techniques needed to provide research-based math and science K - 12 instruction.

Topics include essential math and science concepts and skills, developmentally appropriate pedagogy, culturally responsive instruction, standards-based outcomes, technology enhanced lesson planning, formative/summative assessments, research-based interventions, authentic learning experiences, and reflective practice.

Upon completion, learners will be able to plan, implement, assess, and reflect on developmentally appropriate math and science instruction aligned to the NC Standard Course of Study, other professional and national standards.

### Credit Hours

3

# EDU278 - Integrated Curriculum and Instructional Strategies: Social Studies/ELA

## Overview

**Course Description**
This course is designed to provide learners with the content knowledge, instructional methods/materials, and assessment techniques needed to provide research-based social studies and ELA K -12 instruction.

Topics include essential social studies and ELA concepts and skills, developmentally appropriate pedagogy, culturally responsive instruction, standards-based outcomes, technology enhanced lesson planning, formative/summative assessments, research-based interventions, authentic learning experiences, and reflective practice.

Upon completion, learners will be able to plan, implement, assess, and reflect on developmentally appropriate social studies and ELA instruction aligned to the NC Standard Course of Study, other professional and national standards.

## Credit Hours

3

## Student Learning Outcomes

**Objectives**
Demonstrate knowledge and understanding of key concepts, skills, and attitudes necessary to teach K -12 Social Studies and English Language Arts.

**Objectives**
Apply effective pedagogical approaches to design, plan and implement Social Studies and English Language Arts instruction that aligns with the North Carolina Standard Course of Study, as well as the standards of the National Council for Social Studies and the National Council of Teaching English.

**Objectives**
Choose formal and informal assessments to monitor student learning and plan for instruction in Social Studies and English Language Arts.

**Objectives**
Implement strategies to provide effective, evidence-based interventions for students with difficulties or disabilities in Social Studies or English Language Arts.

# EDU279 - Literacy Development and Instruction

## Overview

**Course Description**
This course is designed to provide students with concepts and skills of literacy development, instructional methods/materials and assessment techniques needed to provide scientifically-based, systematic reading and writing instruction into educational practice.

Topics include literacy concepts, reading and writing development, developmentally appropriate pedagogy, culturally-responsive instruction, standards-based outcomes, lesson planning, formative/summative assessment, recognizing reading difficulties, research-based interventions, authentic learning experiences, classroom implementation, and reflective practice.

Upon completion, students should be able to plan, implement, assess, evaluate, and demonstrate developmentally appropriate literacy instruction aligned to the NC Standard Course of Study and other state and national standards.

## Credit Hours

4

**Course Typically Offered**
Spring, Summer

## Student Learning Outcomes

**Objectives**
Plan and implement developmentally appropriate and authentic literacy experiences that are aligned to state and national standards using a broad repertoire of strategies to meet each student's developmental needs.

**Objectives**
Determine and conduct developmentally appropriate formative and informal assessments to inform teaching and learning.

**Objectives**
Reflect on personal teaching practices to promote positive outcomes for each child.

**Objectives**
Identify strategies for teaching in diverse classrooms, with special attention to social and cultural context as well as second language acquisition.

**Objectives**
Design literacy rich classroom environments which meet the needs of all learners and align with the NC Standard Course of Study.

# EDU280 - Language and Literacy Experiences

## Overview

**Course Description**
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.

## Credit Hours

3

**Course Typically Offered**
Fall, Spring

## Student Learning Outcomes

**Objectives**
Describe developmental sequences for children's emergent receptive and expressive language, including literacy acquisition (phonological awareness, phonemic awareness, alphabetic principles, and print concepts).

**Objectives**
Implement appropriate language and literacy experiences using a broad repertoire of strategies to meet each child's developmental needs

# EDU281 - Instructional Strategies in Reading and Writing

## Overview

**Course Description**
This course covers concepts, resources, and methods for teaching reading and writing to elementary through middle-grade children. Topics include the importance of literacy, learning styles, skills assessment, various reading and writing approaches and instructional strategies. Upon completion, students should be able to assess, plan, implement and evaluate school-age literacy experiences as related to the North Carolina Standard Course of Study.

## Credit Hours

3

## Student Learning Outcomes

**Objectives**
Identify and demonstrate the nature of reading and comprehension

**Objectives**
Reflect on learning and teaching in all four areas

**Objectives**
Research and plan reading and writing experiences for children

**Objectives**
Identify various learning styles

**Objectives**
Develop activities to accommodate learning styles

**Objectives**
Identify and demonstrate instructional strategies to teach reading and writing

# EDU283 - Educator Preparation Practicum

## Overview

**Course Description**
This course is designed to allow learners to demonstrate acquired skills and competencies in a developmentally appropriate learning environment. Topics include dispositions of effective teachers, portfolio assessment development, reflective practice, teaching methods, assessment strategies, and professional practices based on state and national Teaching Standards.

Upon completion, learners should be able to provide a portfolio assessment with evidence of ethical/professional standards, respect for a diverse population in learning environments, content knowledge, appropriate guidance intervention, and grade-level technology enhanced lesson planning/assessments through practices in the classroom environment.

## Credit Hours

3

# EDU284 - Early Childhood Capstone Practicum

## Overview

**Course Description**
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.

### Credit Hours
4

**Course Typically Offered**
Fall, Spring, Summer

### Requisites
**Simple Requisites**

**State prerequisite**
**Type**
Prerequisite

Take One Set: Set 1: EDU-119, EDU-144, EDU-145, EDU-146, and EDU-151 Set 2: EDU-119, PSY-244, PSY-245, EDU-146, and EDU-151 Set 3: EDU-119, EDU-144, PSY-245, EDU-146, and EDU-151 Set 4: EDU-119, PSY-244, EDU-145, EDU-146, and EDU-151

Take 1 group; # Take EDU-119(S24238) EDU-144(S24559) EDU-145(S24560) EDU-146(S24561) EDU-151(S24562); # Take EDU-119(S24238) PSY-244(S12069) PSY-245(S11997) EDU-146(S24561) EDU-151(S24562); # Take EDU-119(S24238) EDU-144(S24559) PSY-245(S11997) EDU-146(S24561) EDU-151(S24562); # Take EDU-119(S24238) PSY-244(S12069) EDU-145(S24560) EDU-146(S24561) EDU-151(S24562);

### Student Learning Outcomes

**Objectives**
Conduct formative assessment to inform teaching and learning.

**Objectives**
Implement developmentally appropriate individual and group learning experiences.

**Objectives**
Reflect on personal teaching practices to promote positive outcomes for each child.

**Objectives**
Demonstrate ethical standards and professional guidelines.

## EGR131 - Introduction to Electronics Technology

### Overview
**Course Description**
This course introduces the basic skills required for electrical/electronics technicians. Topics include soldering/desoldering, safety and sustainability practices, test equipment, scientific calculators, AWG wire table, the resistor color code, electronic devices, problem solving, and use of hand tools. Upon completion, students should be able to solder/desolder, operate test equipment, apply problem-solving techniques, and use a scientific calculator.

### Credit Hours
2

**Course Typically Offered**
Fall, Spring

### Student Learning Outcomes

**Objectives**
Use proper safety procedures in a lab environment

**Objectives**
Operate test equipment

**Objectives**
Use a scientific calculator

**Objectives**
Apply problem-solving techniques

**Objectives**
Demonstrate ability to solder and desolder through-hole and surface mount components on PC boards.

## EGR150 - Introduction to Engineering

### Overview
**Course Description**
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.

### Credit Hours
2

**Course Typically Offered**
Fall, Spring

## Student Learning Outcomes

**Objectives**
Describe the Engineering Profession a. Definition, Disciplines b. Common Traits of Engineers c. Impact of engineering solutions

**Objectives**
Prepare for an Engineering Career a. Transition from high school to college b. Study strategies and habits c. Time management

**Objectives**
Describe the engineering design process. a. Team work and project management (tasks and scheduling) b. Use of journals/engineering paper

**Objectives**
Communicate Progress and Final Results a. Presentation by individuals and groups b. Formal reporting of project/lab results

**Objectives**
Use Entry Level Computer Applications a. Word documents for reports; PowerPoint for presentations b. Excel spreadsheets for recording/ analyzing data and graphing c. Overview of Matlab/MathCAD, FEA/ CAD tools

**Objectives**
Explain the importance of applying ethics to engineering.

**Objectives**
Apply satety rules appropriately within the engineering lab. a. Engineers Creed b. Case study of engineering failure and underlying ethics c. Common safety practices

**Objectives**
Apply dimensional analysis to solve problems using correct units. a. Length, Time, Mass, Temperature b. Force, Energy and Power

**Objectives**
Develop Remote Teamwork Engineering Experience a. Impromptu design/build activities b. Teamwork organization activities c. Robotics design and programming d. Spreadsheet computations/graphing; engineering analysis software

# EGR220 - Engineering Statics

## Overview

**Course Description**
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.

## Credit Hours

3

## Requisites

**Simple Requisites**

**State prerequisite**
**Type**
Prerequisite

Take PHY-251

Take PHY-251(S12543);

**State concurrent or previous courses**
**Type**
Corequisite

Take MAT-272

Take MAT-272(S13612);

# EGR250 - Statics/Strength of Mater

## Overview

**Course Description**
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.

### Credit Hours
5

**Course Typically Offered**
Fall

### Requisites
**Simple Requisites**

**State prerequisite**
**Type**
Prerequisite

Take One: MAT-121 or MAT-171

Take MAT-121(S23927) or MAT-171(S23934);

### Student Learning Outcomes

**Objectives**
Create free-body diagrams

**Objectives**
Demonstrate force vector analysis and equilibrium of force systems for a truss

**Objectives**
Calculate stress in beams using shear and moment diagrams

**Objectives**
Determine strain and deformation of beams of various cross-section geometries

## EGR285 - Design Project

### Overview
**Course Description**
This course provides the opportunity to design an instructor-approved project using previously acquired skills. Emphasis is placed on selection, proposal, design, testing, and documentation of the approved project. Upon completion, students should be able to present and demonstrate projects.

### Credit Hours
2

**Course Typically Offered**
Spring

### Requisites
**Simple Requisites**

**Local Prereq**
**Type**
Prerequisite

DDF-212

Take DDF-212(S20817);

### Student Learning Outcomes

**Objectives**
Design and test a device

**Objectives**
Produce engineering documents of a design project including solid models, working drawings with annotations, and bill of materials

## ELC112 - DC/AC Electricity

### Overview
**Course Description**
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.

### Credit Hours
5

**Course Typically Offered**
Fall, Spring

### Student Learning Outcomes

**Objectives**
Demonstrate safe practices and procedures with tools, materials, and industry accepted test equipment covered in the course.

**Objectives**
Demonstrate appropriate use of test equipment, evaluate circuit performance and apply appropriate troubleshooting techniques to electrical circuits.

**Objectives**
Construct and analyze series, parallel and combinations circuits using appropriate components.

**Objectives**
Use appropriate laws and formulas to perform circuit calculations.

**Objectives**
Interpret electrical schematics.

**Objectives**
Describe the characteristics of various power sources.

**Objectives**
Wire Electric Schematics

**Objectives**
Draw Electrical Schematics

**Objectives**
Troubleshoot with test equipment.

**Objectives**
Analyze problems that arise with electrical equipment.

**Objectives**
Perform circuit calculations.

# ELC113 - Residential Wiring

## Overview

**Course Description**
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.

## Credit Hours

4

**Course Typically Offered**
Fall, Spring

## Student Learning Outcomes

**Objectives**
Identify and demonstrate safe practices and procedures with tools, materials and industry accepted test equipment covered in the course.

**Objectives**
Demonstrate appropriate use of test equipment, evaluate circuit performance and apply appropriate troubleshooting techniques to residential electrical circuits.

**Objectives**
Draw, plan and interpret electrical plans and symbols used in residential applications.

**Objectives**
Identify, size, and install wiring and electrical distribution equipment and devices associated with residential electrical installations in accordance with the National Electrical Code.

**Objectives**
Recognize and demonstrate appropriate use of tools and materials that are used in residential wiring.

# ELC114 - Commercial Wiring

## Overview

**Course Description**
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.

## Credit Hours

4

**Course Typically Offered**
Spring

## Student Learning Outcomes

**Objectives**
Identify and demonstrate safe practices and procedures with tools, materials and industry accepted test equipment covered in the course.

**Objectives**
Demonstrate appropriate use of test equipment, evaluate circuit performance and apply appropriate troubleshooting techniques to industrial electrical circuits.

**Objectives**
Draw, plan, and interpret electrical plans and symbols used in industrial applications.

**Objectives**
Identify, size, and install wiring and electrical distribution equipment and devices associated with industrial electrical installations in accordance with the National Electrical Code.

**Objectives**
Recognize and demonstrate appropriate use of tools and materials that are used in industrial wiring.

# ELC117 - Motors and Controls

## Overview

**Course Description**
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.

## Credit Hours

4

**Course Typically Offered**
Fall, Spring

## Requisites

**Simple Requisites**

**Local Prerequisite**
**Type**
Prerequisite

Take ELC-112(S23481);

Take ELC-112(S23481);

## Student Learning Outcomes

**Objectives**
Demonstrate safe practices and procedures with tools, materials and industry accepted test equipment covered in the course.

**Objectives**
Demonstrate appropriate use of test equipment, evaluate circuit performance and apply appropriate troubleshooting techniques to control circuits.

**Objectives**
Interpret and use ladder and wiring diagrams, symbols, and schematics.

**Objectives**
Demonstrate and describe the use of relays, contactors, motor starters and pilot devices in electrical control circuits.

**Objectives**
Describe principles and operations related to electrical control circuits.

**Objectives**
Describe the concepts of rotating electrical machinery.

**Objectives**
Wire electric schematics

**Objectives**
Draw Electrical Schematics

**Objectives**
Troubleshoot with test equipment.

**Objectives**
Analyze problems that arise with electrical equipment.

**Objectives**
Perform circuit calculations.

**Objectives**
Design and wire motor circuits.

**Objectives**
Troubleshoot motors.

# ELC118 - National Electrical Code

## Overview

**Course Description**
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.

## Credit Hours

2

**Course Typically Offered**
Fall

## Student Learning Outcomes

**Objectives**
Effectively use the NEC

**Objectives**
Be skilled in taking NEC Code License Exams

# ELC119 - NEC Calculations

## Overview

**Course Description**
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.

## Credit Hours

2

**Course Typically Offered**
Spring

## Student Learning Outcomes

**Objectives**
Locate and cite specific Code rules and sections using NEC Chapter and Article arrangement and the NEC Index and Table of Contents.

**Objectives**
Interpret various Code rules and sections.

**Objectives**
Select appropriate tables and figures to locate data.

**Objectives**
Select conductors and equipment for a specific application.

**Objectives**
Select boxes and fittings required for a specific application.

**Objectives**
Determine overcurrent protective device rules.

**Objectives**
Discuss the impact of international electrical standards.

# ELC121 - Electrical Estimating

## Overview

**Course Description**
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.

## Credit Hours

2

**Course Typically Offered**
Fall, Summer

## Requisites

**Simple Requisites**

**Local Prerequisite**
**Type**

Prerequisite

TAKE ELC-113

Take ELC-113(S23518);

## Student Learning Outcomes

**Objectives**
Describe take-off codes.

**Objectives**
Describe labor costs.

**Objectives**
Describe overhead costs.

**Objectives**
Describe profit and loss costs.

**Objectives**
Use calculations to estimate electrical projects costs.

**Objectives**
Demonstrate understanding of electrical bidding.

**Objectives**
Complete electrical estimating worksheets.

**Objectives**
Use software to improve electrical calculation estimates.

# ELC122 - Advanced Residential Wiring

## Overview

**Course Description**
This course introduces advanced topics in residential electrical installations including the requirements of the National Electrical Code (NEC). Topics include NEC, special purpose outlets, telephone and low voltage signal systems, swimming pool electrical systems, home automation systems, standby power systems and residential utility-interactive photovoltaic systems. Upon completion, students should be able to properly install conduits, wiring, electrical distribution equipment, low voltage, standby power, automated systems, and utility-interactive photovoltaic systems associated with advanced residential electrical installations.

## Credit Hours

4

**Course Typically Offered**
Fall, Spring

## Requisites

**Simple Requisites**

**State prerequisite**
**Type**
Prerequisite

Take ELC-113

Take ELC-113(S23518);

## Student Learning Outcomes

**Objectives**
Identify and demonstrate safe practices and procedures with tools, materials and industry accepted test equipment covered in the course.

**Objectives**
Demonstrate appropriate use of test equipment, evaluate circuit performance and apply appropriate troubleshooting techniques to advanced residential electrical circuits.

**Objectives**
Draw, plan and interpret electrical plans and symbols used in advanced residential applications.

**Objectives**
Identify, size, and install wiring and electrical distribution equipment and devices associated with advanced residential electrical installations in accordance with the National Electrical Code.

# ELC125 - Diagrams and Schematics

## Overview

**Course Description**
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.

## Credit Hours

2

**Course Typically Offered**
Fall

### Student Learning Outcomes

**Objectives**
Students will be able to analyze electrical drawings to recognize standard symbols that are used throughout the industry to determine raceways, conductors's equipment, and circuit connection.

## ELC127 - Software for Technicians

### Overview

**Course Description**
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.

### Credit Hours
2

**Course Typically Offered**
Spring, Summer

### Student Learning Outcomes

**Objectives**
Use the computation of electrical principles and concepts in applying technical calculations.

**Objectives**
Demonstrate the science of numbers and their operations, the relations between them, including space configurations, structure, and measurement of various electrical systems.

**Objectives**
Analyze problems that arise with electrical/electronic equipment.

**Objectives**
Perform circuit calculations with advanced computer software.

**Objectives**
Design and test simulated electrical and electronic circuits.

## ELC128 - Introduction to Programmable Logic Controller

### Overview

**Course Description**
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.

### Credit Hours
3

**Course Typically Offered**
Fall, Spring

### Requisites

**Simple Requisites**

**Local Prerequisite**
**Type**
Prerequisite

ELC-112 or ELC-131

Take ELC-112(S23481) or ELC-131(S23482);

### Student Learning Outcomes

**Objectives**
Identify and demonstrate safe practices and procedures with tools, materials and industry accepted test equipment covered in the course.

**Objectives**
List and describe the hardware components used in PLC systems.

**Objectives**
Utilize numbering systems as applied to PLCs.

**Objectives**
Demonstrate and describe the use of various PLC instruction sets.

**Objectives**
Create various simple PLC programs using the appropriate instruction set.

**Objectives**
Apply appropriate troubleshooting methods to PLCs.

**Objectives**
Install a PLC

**Objectives**
Draw Ladder Diagrams

**Objectives**
Troubleshoot Programs

**Objectives**
Analyze problems that arise with electrical equipment

**Objectives**
Perform program changes.

**Objectives**
Design and program from flow charts.

**Objectives**
Troubleshoot a complete PLC system.

**Objectives**
Know at least two different PLC instruction systems.

**Objectives**
Write a detailed explanation of the processes and applications of a programmable logic controller.

**Objectives**
Document troubleshooting procedures in a clear and precise manner.

**Objectives**
Write in appropriate technical language and Standard English.

# ELC131 - Circuit Analysis I

## Overview

**Course Description**
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.

## Credit Hours

4

**Course Typically Offered**
Fall, Spring

## Student Learning Outcomes

**Objectives**
Identify and describe the operation of components used in DC/AC circuits.

**Objectives**
Apply math formulas and circuit theorems in the analyses of DC/AC Circuits.

**Objectives**
Locate and select DC/AC devices using component specifications based on circuit requirements.

**Objectives**
Construct series, parallel and combination circuits.

**Objectives**
Select and demonstrate the use of appropriate test equipment to analyze circuit operation.

**Objectives**
Using appropriate troubleshooting techniques evaluate circuit performance applying suitable repair methods.

**Objectives**
Identify and demonstrate safe workplace practices.

**Objectives**
Identify electrical components

**Objectives**
Identify basic electrical quantities

**Objectives**
Mathematically manipulate basic electrical quantities

**Objectives**
Measure basic electrical quantities

**Objectives**
Interpret circuit schematics

**Objectives**
Construct DC and AC circuits

**Objectives**
Verify DC and AC circuits

**Objectives**
Analyze DC and AC circuits using test equipment

**Objectives**
Troubleshoot DC and AC circuits using test equipment

**Objectives**
The student will be able to produce a variety of documents to demonstrate their understanding of electronic components, usage of test equipment and troubleshooting methods.

# ELC131A - Circuit Analysis I Lab

## Overview

**Course Description**
This course provides laboratory assignments as applied to fundamental principles of DC/AC electricity. Emphasis is placed on measurements and evaluation of electrical components, devices and circuits. Upon completion, the students will gain hands-on experience by measuring voltage, current, and opposition to current flow utilizing various meters and test equipment.

## Credit Hours

1

**Course Typically Offered**
Fall, Spring

## Requisites

**Simple Requisites**

**State concurrent or previous courses**
**Type**
Corequisite

Take ELC-131

Take ELC-131(S13459);

## Student Learning Outcomes

**Objectives**
Identify electrical components

**Objectives**
Identify basic electrical quantities

**Objectives**
Mathematically manipulate basic electrical quantities

**Objectives**
Measure basic electrical quantities

**Objectives**
Interpret circuit schematics

**Objectives**
Construct DC and AC circuits

**Objectives**
Verify DC and AC circuits

**Objectives**
Analyze DC and AC circuits using test equipment

**Objectives**
Troubleshoot DC and AC circuits using test equipment

**Objectives**
The student will be able to produce a variety of documents to demonstrate their understanding of electronic components, usage of test equipment and troubleshooting methods.

## ELC213 - Instrumentation

### Overview

**Course Description**
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.

### Credit Hours

4

### Requisites

**Simple Requisites**

**Local Prerequisite**
**Type**
Prerequisite

Take ELC-111 ELC-112(S21587) or ELC-131(S21593);

Take ELC-111 ELC-112(S21587) or ELC-131(S21593);

## ELC220 - Photovoltaic System Technology

### Overview

**Course Description**
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.

### Credit Hours

3

**Course Typically Offered**
Spring

### Student Learning Outcomes

**Objectives**
Identify common types of photovoltaic system applications.

**Objectives**
Identify the various safety hazards associated with both operating and non- operating PV systems and components.

**Objectives**
Understand the fundamentals of electric utility system operations.

**Objectives**
Define basic terminology relating to the photovoltaic industry

**Objectives**
Identify key electrical output parameters for photovoltaic modules using manufacturers' literature and label these points on a current-voltage curve.

**Objectives**
Describe the purpose and principles of operation for major photovoltaic system components.

**Objectives**
Utilize basic principles, rationale and strategies for sizing photovoltaic systems.

**Objectives**
Understand how photovoltaic modules are configured to interface with inverters, charge controllers, batteries and other equipment.

**Objectives**
Discuss various potential problems related to photovoltaic system design, components, installation, operation or maintenance that may affect the performance and reliability of photovoltaic systems.

## ELC228 - Programmable Logic Controllers Applications

### Overview

**Course Description**
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.

## Credit Hours
4

**Course Typically Offered**
Fall

## Requisites
**Simple Requisites**

**Prerequisite**
**Type**
Prerequisite

Take ELC-128;

Take ELC-128(S10676);

## Student Learning Outcomes

**Objectives**
Identify PLC hardware components

**Objectives**
Create drivers and establish PC-PLC communications

**Objectives**
Identify basic PLC instructions

**Objectives**
Create simple PLC programs using Relay Ladder Logic

**Objectives**
Troubleshoot Relay Ladder Logic PLC programs

# ELC229 - Applications Project

## Overview
**Course Description**
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.

## Credit Hours
2

**Course Typically Offered**
Spring

## Requisites
**Simple Requisites**

**Prerequisite**
**Type**
Prerequisite

Take ELC-112(S21587) ELC-113 or ELC-140;

Take ELC-112(S21587) ELC-113(S11805) or ELC-140;

## Student Learning Outcomes

**Objectives**
Plan a simulated die cast machine

**Objectives**
Create a bill of materials

**Objectives**
Create and update project planner template

**Objectives**
Develop a simulated die cast machine using Automation Studio software

**Objectives**
Assemble and present a final project presentation

# ELN131 - Analog Electronics I

## Overview
**Course Description**
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.

## Credit Hours
4

**Course Typically Offered**
Spring

## Requisites

**Simple Requisites**

**Recommended concurrent or previous courses**
**Type**
Corequisite

Take ELC-131 or ELC-112

Take ELC-131(S23482) or ELC-112(S23481);

## Student Learning Outcomes

**Objectives**
Identify and describe operation of semiconductor devices.

**Objectives**
Analyze where and how analog components are used.

**Objectives**
Locate and select analog devices using component specifications based on circuit requirements.

**Objectives**
Construct operational circuits using analog devices.

**Objectives**
Select and demonstrate the use of appropriate test equipment to analyze circuit operation.

**Objectives**
Using appropriate troubleshooting techniques evaluate circuit performance applying suitable repair methods.

**Objectives**
Identify and demonstrate safe workplace practices.

**Objectives**
Construct discrete component circuits using appropriate techniques

**Objectives**
Analyze discrete component circuits using appropriate techniques and test equipment

**Objectives**
Troubleshoot and verify discrete component circuits using appropriate techniques and test equipment

# ELN132 - Analog Electronics II

## Overview

**Course Description**
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.

## Credit Hours

4

**Course Typically Offered**
Fall, Summer

## Student Learning Outcomes

**Objectives**
Construct linear integrated circuits using appropriate techniques

**Objectives**
Analyze linear integrated circuits using appropriate techniques and test equipment

**Objectives**
Troubleshoot and verify linear integrated circuits using appropriate techniques and test equipment

# ELN133 - Digital Electronics

## Overview

**Course Description**
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.

### Credit Hours
4

**Course Typically Offered**
Spring

### Student Learning Outcomes

**Objectives**
Identify and describe the operation of digital electronic devices and circuits.

**Objectives**
Analyze where and how digital electronics circuits are used.

**Objectives**
Locate and select digital electronic devices using component specifications based on circuit requirements.

**Objectives**
Construct operational circuits using digital devices.

**Objectives**
Select and demonstrate the use of appropriate test equipment to analyze circuit operation.

**Objectives**
Using appropriate troubleshooting techniques evaluate circuit performance applying suitable repair methods.

**Objectives**
Identify and demonstrate safe workplace practices.

**Objectives**
Convert between various number systems

**Objectives**
Construct digital circuits using appropriate techniques

**Objectives**
Analyze digital circuits using appropriate techniques and test equipment

**Objectives**
Troubleshoot and verify digital circuits using appropriate techniques and test equipment

## ELN231 - Industrial Controls

### Overview

**Course Description**
This course introduces the fundamental concepts of control of rotating machinery and associated peripheral devices. Topics include rotating machine theory, ladder logic, electromechanical and solid state relays, motor controls, pilot devices, three-phase power systems, and other related topics. Upon completion, students should be able to interpret schematics and demonstrate an understanding of electromechanical and electronic control of rotating machinery.

### Credit Hours
3

**Course Typically Offered**
Spring

### Requisites

**Simple Requisites**

**Prerequisite**
**Type**
Prerequisite

TAKE ELC-112 ELC-131 AND ELC-140

Take ELC-112(S23481) ELC-131(S23482) or ELC-140;

### Student Learning Outcomes

**Objectives**
Identify elements of open and closed loop systems

**Objectives**
Identify pressure, temperature, flow, and level systems & components

**Objectives**
Identify industrial detection devices & sensing methods

**Objectives**
Wire and troubleshoot advanced system projects

# ELN232 - Introduction to Microprocessors

## Overview

**Course Description**
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.

## Credit Hours

4

**Course Typically Offered**
Fall, Spring

## Student Learning Outcomes

**Objectives**
Identify the components of an embedded computer system

**Objectives**
Use Integrated Development Environment software to write source code, assemble the source code and download the machine code to an embedded processor

**Objectives**
Write source code in assembly language to control devices interfaced to a microcontroller

**Objectives**
Troubleshoot assembly language programs

# ELN234 - Communication Systems

## Overview

**Course Description**
This course introduces the fundamentals of electronic communication systems. Topics include the frequency spectrum, electrical noise, modulation techniques, characteristics of transmitters and receivers, and digital communications. Upon completion, students should be able to interpret analog and digital communication circuit diagrams, analyze transmitter and receiver circuits, and use appropriate communication test equipment.

## Credit Hours

4

## Requisites

**Simple Requisites**

**Prerequisite**
**Type**
Prerequisite

ELN-132 OR ELN-140

Take ELN-132(S23509) or ELN-140;

## Student Learning Outcomes

**Objectives**
Define and explain the electromagnetic spectrum and its use in radio frequency communication

**Objectives**
Calculate gain and attenuation in decibels (dB)

**Objectives**
Explain signal to noise ratio

**Objectives**
Explain the types of modulation used in electronic communication systems

**Objectives**
Determine the modulation index and percent of modulation for FM and AM communication systems

**Objectives**
Explain the distribution of sidebands associated with a communication signal

**Objectives**
Compare analog and digital communication techniques and discuss the advantages of each

**Objectives**
Describe the types and principles of multiplexing and demultiplexing

**Objectives**
Analyze the operation of transmitter and receiver circuits

**Objectives**
Describe the basic types of digital modulation

**Objectives**
Describe the types and principles of binary data transmission

**Objectives**
Explain and describe the principles of transmission lines

**Objectives**
Use an SWR Analyzer to measure the SWR of an antenna

## ELN236 - Fiber Optics and Lasers

### Overview

**Course Description**
This course introduces the fundamentals of fiber optics and lasers. Topics include the transmission of light; characteristics of fiber optic and lasers and their systems; fiber optic production; types of lasers; and laser safety. Upon completion, students should be able to understand fiber optic communications and basic laser fundamentals.

### Credit Hours

4

## ELN247 - Electronic App Project

### Overview

**Course Description**
This course provides a structured approach to an application-oriented electronics project. Emphasis is placed on selecting, planning, implementing, testing, and presenting an application-oriented project. Upon completion, students should be able to present and demonstrate an electronics application-oriented project.

### Credit Hours

2

**Course Typically Offered**
Spring

### Requisites

**Simple Requisites**

**Prerequisite**
**Type**
Prerequisite

Take ELN-133 ELN-132 or ELN-140;

Take ELN-133(S23488) ELN-132(S23509) or ELN-140;

### Student Learning Outcomes

**Objectives**
Write a Project Planning Report, which describes the project, including possible uses for the project, anticipated costs, etc.

**Objectives**
Prepare a schedule of tasks to be accomplished throughout the project. The schedule is to include start/stop dates and total hours allocated to each task.

**Objectives**
Present and demonstrate an electronics application-oriented project.

## ELN260 - Programmable Logic Controllers

### Overview

**Course Description**
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.

### Credit Hours

4

**Course Typically Offered**
Summer

### Requisites

**Simple Requisites**

**Local Prerequisite**
**Type**
Prerequisite

Take ELC-128

Take ELC-128(S23522);

### Student Learning Outcomes

**Objectives**
Identify PLC hardware components

**Objectives**
Create drivers and establish PC-PLC communications

**Objectives**
Identify basic PLC instructions

**Objectives**
Create simple PLC programs using Relay Ladder Logic

**Objectives**
Troubleshoot Relay Ladder Logic PLC programs

## ELN275 - Troubleshooting

### Overview

**Course Description**
This course covers techniques of analyzing and repairing failures in electronic equipment. Topics include safety, signal tracing, use of service manuals, and specific troubleshooting methods for analog, digital, and other electronics-based circuits and systems. Upon completion, students should be able to logically diagnose and isolate faults and perform necessary repairs to meet manufacturers' specifications.

### Credit Hours

2

**Course Typically Offered**
Fall, Spring

### Requisites

**Simple Requisites**

**Prerequisite**
**Type**
Prerequisite

TAKE ELN-133 ELN-132

Take ELN-133(S23488) ELN-132(S23509);

### Student Learning Outcomes

**Objectives**
Logically diagnose and isolate fault(s), and perform necessary repairs to meet manufacturer specifications.

**Objectives**
Analyze schematic diagrams, line diagrams, block diagrams, flow charts and blueprints to logically diagnose and isolate fault(s).

**Objectives**
Troubleshoot and verify electronics related applications programs using appropriate techniques and test equipment Identify electrical components.

## EMS110 - EMT

### Overview

**Course Description**
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.

### Credit Hours

9

## EMS122 - EMS Clinical Practicum I

### Overview

**Course Description**
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 competency with fundamental paramedic level skills.

### Credit Hours

1

### Requisites

**Simple Requisites**

**State prerequisite**
**Type**
Prerequisite

Take EMS-110

Take EMS-110(S25182);

# EMS130 - Pharmacology

## Overview

**Course Description**
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.

## Credit Hours

4

## Requisites

**Simple Requisites**

**State prerequisite**
**Type**
Prerequisite

Take EMS-110

Take EMS-110(S25182);

# EMS131 - Advanced Airway Management

## Overview

**Course Description**
This course is designed to provide advanced airway management techniques and is required for paramedic certification. Topics must meet current guidelines for advanced airway management in the pre-hospital setting. Upon completion, students should be able to properly utilize all airway adjuncts and pharmacology associated with airway control and maintenance.

## Credit Hours

2

## Requisites

**Simple Requisites**

**State prerequisite**
**Type**
Prerequisite

Take EMS-110

Take EMS-110(S25182);

# EMS160 - Cardiology I

## Overview

**Course Description**
This course introduces the study of cardiovascular emergencies and is required for paramedic certification. Topics include anatomy and physiology, pathophysiology, electrophysiology, and rhythm interpretation. Upon completion, students should be able to recognize and interpret rhythms.

## Credit Hours

3

## Requisites

**Simple Requisites**

**State prerequisite**
**Type**
Prerequisite

Take EMS-110

Take EMS-110(S25182);

# EMS220 - Cardiology II

## Overview

**Course Description**
This course provides an in-depth study of cardiovascular emergencies and is required for paramedic certification. Topics include assessment and treatment of cardiac emergencies, cardiac pharmacology, and patient care. Upon completion, students should be able to manage the cardiac patient.

## Credit Hours

3

## Requisites

**Simple Requisites**

**State prerequisite**
**Type**
Prerequisite

Take All: EMS-122, EMS-130, and EMS-160

Take EMS-122(S25185) EMS-130(S25187) EMS-160(S25189);

# EMS221 - EMS Clinical Practicum II

## Overview

**Course Description**
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.

## Credit Hours

2

### Requisites

**Simple Requisites**

**State prerequisite**
**Type**
Prerequisite

Take One: EMS-121 or EMS-122

Take EMS-121(S25184) or EMS-122(S25185);

## EMS231 - EMS Clinical Practicum III

### Overview

**Course Description**
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.

### Credit Hours

3

### Requisites

**Simple Requisites**

**State prerequisite**
**Type**
Prerequisite

Take EMS-221

Take EMS-221(S25191);

## EMS240 - Patients With Special Challenges

### Overview

**Course Description**
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.

### Credit Hours

2

### Requisites

**Simple Requisites**

**State prerequisite**
**Type**
Prerequisite

Take All: EMS-122 and EMS-130

Take EMS-122(S23872) EMS-130(S23874);

## EMS241 - EMS Clinical Practicum IV

### Overview

**Course Description**
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.

### Credit Hours

4

### Requisites

**Simple Requisites**

**State prerequisite**
**Type**
Prerequisite

Take EMS-231

Take EMS-231(S25192);

## EMS250 - Medical Emergencies

### Overview

**Course Description**
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.

### Credit Hours

4

### Requisites

**Simple Requisites**

**State prerequisite**
**Type**
Prerequisite

Take All: EMS-122 and EMS-130

Take EMS-122(S23872) EMS-130(S23874);

## EMS260 - Trauma Emergencies

### Overview

**Course Description**
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.

### Credit Hours
2

### Requisites
**Simple Requisites**

**State prerequisite**
**Type**
Prerequisite

Take All: EMS-122 and EMS-130

Take EMS-122(S23872) EMS-130(S23874);

## EMS270 - Life Span Emergencies

### Overview
**Course Description**
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.

### Credit Hours
4

### Requisites
**Simple Requisites**

**State prerequisite**
**Type**
Prerequisite

Take All: EMS-122 and EMS-130

Take EMS-122(S25185) EMS-130(S25187);

## EMS285 - EMS Capstone

### Overview
**Course Description**
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.

### Credit Hours
2

### Requisites
**Simple Requisites**

**State prerequisite**
**Type**
Prerequisite

Take All: EMS-220, EMS-250, and EMS-260

Take EMS-220(S16342) EMS-250(S11267) EMS-260(S10208);

## ENG045 - English Skills Support

### Overview
**Course Description**
This course provides academic support for the successful completion of gateway English courses by supplementing and reinforcing classroom instruction. Emphasis is placed on developing a growth mindset, expanding skills in active reading and writing processes, applying editing and revision strategies, exercising standard writing conventions through contextualized instruction, and ethically using appropriate technology when reading and writing. Upon completion, students should be able to apply active reading strategies to college-level texts and produce unified, well-developed essays using standard written English.

### Credit Hours
2

**Course Typically Offered**
Fall, Spring, Summer

## ENG102 - Applied Communications II

### Overview
**Course Description**
This course is designed to enhance writing and speaking skills for the workplace. Emphasis is placed on generating short writings such as job application documents, memoranda, and reports and developing interpersonal communication skills with employees and the public. Upon completion, students should be able to prepare effective, short, and job-related written and oral communications.

### Credit Hours
3

**Course Typically Offered**
Spring, Summer

### Student Learning Outcomes

**Objectives**
Communicate orally before an audience or within an interpersonal situation

**Objectives**
Use the steps in the writing process to communicate effectively.

**Objectives**
Write a well-developed paragraph that is unified, clear, and coherent.

**Objectives**
Use formatting and content specifications to compose various workplace documents such as business letters, memorandums, reports, and resumes.

**Objectives**
Apply computer skills essential to workplace writing.

**Objectives**
Demonstrate effective organization and style, based upon clear determination of purpose and analysis of audience.

**Objectives**
Evaluate workplace situations and report practical solutions and/or recommendations.

**Objectives**
Create workplace documents that reveal a mastery of composition and design skills.

# ENG110 - Freshman Composition

## Overview

**Course Description**
This course is designed to develop informative and business writing skills. Emphasis is placed on logical organization of writing, including effective introductions and conclusions, precise use of grammar, and appropriate selection and use of sources. Upon completion, students should be able to produce clear, concise, well-organized short papers.

## Credit Hours

3

# ENG111 - Writing and Inquiry

## Overview

**Course Description**
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. This course has been approved for transfer under the CAA as a general education course in English Composition. This course has been approved for transfer under the ICAA as a general education course in English Composition.

## Credit Hours

3

## Requisites

**Simple Requisites**

**Local Prerequiste**
**Type**
Corequisite

Take ENG-045

Take 1 group; # Take DRE-098(S23643); # Take ENG-002; From rule RMINP2; # Take BSP-4002; From rule BSPMINP2; # Take ENG-090 RED-090; # Take ENG-095; # Take ENG-011; # Take ENG-045;

## Student Learning Outcomes

**Objectives**
Demonstrate writing as a recursive process.

**Objectives**
Demonstrate writing and inquiry in context using different rhetorical strategies to reflect, analyze, explain, and persuade in a variety of genres and formats.

**Objectives**
Students will reflect upon and explain their writing strategies.

**Objectives**
Demonstrate the critical use and examination of printed, digital, and visual materials.

**Objectives**
Locate, evaluate, and incorporate relevant sources with proper documentation.

**Objectives**
Compose texts incorporating rhetorically effective and conventional use of language.

**Objectives**
Collaborate actively in a writing community.

## ENG112 - Writing and Research in the Disciplines

### Overview

**Course Description**
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.

### Credit Hours

3

**Course Typically Offered**
Fall, Spring, Summer

### Requisites

**Simple Requisites**

**State prerequisite**
**Type**
Prerequisite

Take ENG-111

Take ENG-111(S25433);

### Student Learning Outcomes

**Objectives**
Read, locate and evaluate a variety of information using research methodologiesappropriate to disciplines.

**Objectives**
Apply research and use writing to achieve a variety of purposes in a variety ofdisciplinary contexts.

**Objectives**
Demonstrate accurate and responsible documentation appropriate to disciplines.

**Objectives**
Present, individually or collaboratively, work appropriate to rhetorical situation.

**Objectives**
Communicate critical insights such as theme and thematic patterns, critical approaches,and genres for written and oral assignments.

## ENG113 - Literature-Based Research

### Overview

**Course Description**
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.

### Credit Hours

3

### Requisites

**Simple Requisites**

**State prerequisite**
**Type**
Prerequisite

Take ENG-111

Take ENG-111(S13673);

### Student Learning Outcomes

**Objectives**
Present critical and analytical skills in reference to poetry and prose.

**Objectives**
Write interpretive essays on literature, incorporating the significance of structural elements basic to literature such as points of view, plot structure and conflict, narrative strategies, style, tone, mood, setting, and character.

**Objectives**
Identify and use the basic vocabulary of literary analysis.

**Objectives**
Evaluate and use reliable, approved sources in the development of writing assignments by conducting research in the library and electronically.

**Objectives**
Compose well-developed, MLA-formatted, analytical essays, using primary sources and proper documentation.

**Objectives**
Communicate critical insights such as theme and thematic patterns, critical approaches, genres, and historical context for all written and oral assignments.

# ENG114 - Professional Research & Reporting

## Overview

**Course Description**
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.

## Credit Hours

3

**Course Typically Offered**
Fall, Spring, Summer

## Requisites

**Simple Requisites**

**State prerequisite**
**Type**
Prerequisite

Take ENG-111

Take ENG-111(S13673);

## Student Learning Outcomes

**Objectives**
Communicate in writing and orally while considering the audience and the situation.

**Objectives**
Compose and format various professional documents such as business letters, memoranda, reports, and resumes.

**Objectives**
Demonstrate an ability to use the appropriate technologies to produce workplace documents and presentations.

**Objectives**
Organize information according to correspondence purpose and type.

**Objectives**
Evaluate workplace situations and report practical solutions and/or recommendations.

**Objectives**
Create workplace documents that reveal a mastery of composition and design skills.

**Objectives**
7Work in concert with others to produce effective documents and presentations.

# ENG115 - Oral Communication

## Overview

**Course Description**
This course introduces the basic principles of oral communication in both small group and public settings. Emphasis is placed on the components of the communication process, group decision-making, and public address. Upon completion, students should be able to demonstrate the principles of effective oral communication in small group and public settings.

### Credit Hours
3

### Student Learning Outcomes

**Objectives**
Develop strategies for speaking in a variety of settings.

**Objectives**
Identify the parts of formal speeches.

**Objectives**
Construct outlines and other preparation materials for giving a speech.

**Objectives**
Recognize and evaluate how word choice and presentation style affect an audience.

**Objectives**
Evaluate the expectations for different types of presentations.

**Objectives**
Compose and produce oral presentations that respond to the particular criteria given.

**Objectives**
Identify the components of the communication process.

## ENG116 - Technical Report Writing

### Overview

**Course Description**
This course, the second in a series of two, introduces layout and design of technical reports used in business and industry. Emphasis is placed on audience analysis, data collection and analysis, technical writing style and organization, oral presentation of technical data, and the appropriate use of graphics in written and oral presentations. Upon completion, students should be able to produce written and oral reports using a variety of technical communication models.

### Credit Hours
3

**Course Typically Offered**
Fall

### Requisites

**Simple Requisites**

**State prerequisite**
**Type**
Prerequisite

Take One: ENG-110 or ENG-111

Take ENG-110(S13348) or ENG-111(S13673);

### Student Learning Outcomes

**Objectives**
Communicate before an audience orally and in writing.

**Objectives**
Assemble in an acceptable style a standard business letter.

**Objectives**
Create an in-house memorandum that informs, requests, announces, or explains.

**Objectives**
Construct special-purpose business letters.

**Objectives**
Evaluate the effectiveness of design features in technical writing.

**Objectives**
Use word-processing software efficiently.

**Objectives**
Use computer software to convert narrative data into graphic data.

**Objectives**
Craft a job resume and develop a letter of personal introduction.

**Objectives**
Assemble a full-blown business proposal.

**Objectives**
Compose unique works of creative writing in poetry, prose, and drama.

## ENG125 - Creative Writing I

### Overview

**Course Description**
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.

### Credit Hours

3

**Course Typically Offered**
Fall, Spring

### Requisites

**Simple Requisites**

**State prerequisite**
**Type**
Prerequisite

Take ENG-111

Take ENG-111(S13673);

### Student Learning Outcomes

**Objectives**
Examine the basic structures of poetry, prose, and drama.

**Objectives**
Translate the basic structures of creative writing to their own writing projects.

**Objectives**
Analyze a given piece of work for its effectiveness overall and for a given topic such as voice, structure, and characterization.

**Objectives**
Evaluate the work of professional and peer writers.

## ENG126 - Creative Writing II

### Overview

**Course Description**
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.

### Credit Hours

3

**Course Typically Offered**
Fall, Spring

### Requisites

**Simple Requisites**

**State prerequisite**
**Type**
Prerequisite

Take ENG-125

Take ENG-125(S16350);

### Student Learning Outcomes

**Objectives**
Examine the basic structures of poetry, prose, and drama.

**Objectives**
Translate the basic structures of creative writing to their own writing projects.

**Objectives**
Analyze a given piece of work for its effectiveness overall and for a given topic such as voice, structure, and characterization.

**Objectives**
Evaluate the work of professional and peer writers.

**Objectives**
Compose unique works of creative writing in poetry, prose, and drama.

**Objectives**
Submit works of creative writing to professional publications.

# ENG231 - American Literature I

## Overview

**Course Description**
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.

## Credit Hours

3

**Course Typically Offered**
Fall, Summer

## Requisites

**Simple Requisites**

**State prerequisite**
**Type**
Prerequisite

Take One: ENG-112, ENG 113, or ENG 114

Take ENG-112(S24024) ENG-113 or ENG-114(S13706);

## Student Learning Outcomes

**Objectives**
Describe, analyze, interpret and evaluate features of literary texts in several genres, applying appropriate literary and cultural terms.

**Objectives**
Critically analyze and interpret American literature from its beginnings to 1865 within historical and cultural contexts.

# ENG232 - American Literature II

## Overview

**Course Description**
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.

## Credit Hours

3

**Course Typically Offered**
Fall, Spring, Summer

## Requisites

**Simple Requisites**

**State prerequisite**
**Type**
Prerequisite

Take One: ENG-112, ENG-113, or ENG-114

Take ENG-112(S24024) ENG-113 or ENG-114(S13706);

## Student Learning Outcomes

**Objectives**
Describe, analyze, interpret, and evaluate features of literary texts in several genres, applying appropriate literary and cultural terms.

**Objectives**
Critically analyze and interpret American literature from 1865 to the present within historical and cultural contexts.

**Objectives**
Write critical essays about American literature that integrate primary and secondary sources using MLA documentation and standard academic written conventions.

# ENG233 - Major American Writers

## Overview

**Course Description**
This course provides an intensive study of the works of several major American authors. Emphasis is placed on American history, culture, and the literary merits. Upon completion, students should be able to interpret, analyze, and evaluate the works studied.

## Credit Hours
3

## Requisites
**Simple Requisites**

**State prerequisite**
**Type**
Prerequisite

Take One: ENG-112, or ENG-113, or ENG-114

Take ENG-112(S13681) ENG-113 or ENG-114(S13706);

## Student Learning Outcomes

**Objectives**
Interpret and discuss, both orally and in writing, the works of major American writers in the context of literary periods (Puritanism, Enlightenment, Romanticism, Realism, Naturalism, Modernism, etc.)

**Objectives**
Demonstrate understanding of the social, religious, and intellectual contexts of major American works.

**Objectives**
Trace the development of themes and genres within their historical contexts.

**Objectives**
Use the styles of major writers to analyze literary works for their aesthetic features and thematic patterns.

**Objectives**
Identify and discuss styles, themes, and works of major writers.

**Objectives**
Research and evaluate critical approaches to literature while distinguishing between critical and popular reception of works of major writers.

**Objectives**
Compose a well-developed, MLA-formatted, analytical essay, engaging with primary source(s) and using proper documentation.

# ENG241 - British Literature I

## Overview
**Course Description**
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.

## Credit Hours
3

**Course Typically Offered**
Fall

## Requisites
**Simple Requisites**

**State prerequisite**
**Type**
Prerequisite

Take ENG-112, ENG-113, or ENG-114

Take ENG-112(S24024) ENG-113 or ENG-114(S13706);

## Student Learning Outcomes

**Objectives**
Interpret and discuss, both orally and in writing, the works of major British writers in the context of literary periods (Medieval, Renaissance, Neoclassical, etc.)

**Objectives**
Demonstrate understanding of the social, religious, and intellectual contexts of major British works.

**Objectives**
Trace the development of themes and genres within their historical contexts.

**Objectives**
Use the styles of major writers to analyze literary works for their aesthetic features and thematic patterns.

**Objectives**
Identify and discuss styles, themes, and works of major writers.

**Objectives**
Research and evaluate critical approaches to literature while distinguishing between critical and popular reception of works of major writers.

**Objectives**
Compose a well-developed, MLA-formatted, analytical essay, engaging with primary source(s) and using proper documentation.

# ENG242 - British Literature II

## Overview

**Course Description**
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.

## Credit Hours

3

**Course Typically Offered**
Spring

## Requisites

**Simple Requisites**

**State prerequisite**
**Type**
Prerequisite

Take One: ENG-112, ENG-113, or ENG-114

Take ENG-112(S13681) ENG-113 or ENG-114(S13706);

## Student Learning Outcomes

**Objectives**
Interpret and discuss, both orally and in writing, the works of major British writers in the context of literary periods (Romantic, Victorian, Modern, etc.)

**Objectives**
Demonstrate understanding of the social, religious, and intellectual contexts of major British works.

**Objectives**
Trace the development of themes and genres within their historical contexts.

**Objectives**
Use the styles of major writers to analyze literary works for their aesthetic features and thematic patterns.

**Objectives**
Identify and discuss styles, themes, and works of major writers.

**Objectives**
Research and evaluate critical approaches to literature while distinguishing between critical and popular reception of works of major writers.

**Objectives**
Compose a well-developed, MLA-formatted, analytical essay, engaging with primary source(s) and using proper documentation.

# ENG243 - Major British Writers

## Overview

**Course Description**
This course provides an intensive study of the works of several major British authors. Emphasis is placed on British history, culture, and the literary merits. Upon completion, students should be able to interpret, analyze, and evaluate the works studied.

## Credit Hours

3

## Requisites

**Simple Requisites**

**State prerequisite**
**Type**
Prerequisite

Take One: ENG-112, ENG-113, or ENG-114

Take ENG-112(S13681) ENG-113 or ENG-114(S13706);

## Student Learning Outcomes

**Objectives**
Interpret and discuss, both orally and in writing, the works of major British writers in literary periods (Medieval, Renaissance, Neoclassical, Romantic, Victorian, and/or Modern).

**Objectives**
Demonstrate understanding of the social, religious, and intellectual contexts of major British works.

**Objectives**
Trace the development of themes and genres within their historical contexts.

**Objectives**
Use the styles of major writers to analyze literary works for their aesthetic features and thematic patterns.

**Objectives**
Identify and discuss styles, themes, and works of major writers.

**Objectives**
Research and evaluate critical approaches to literature while distinguishing between critical and popular reception of works of major writers.

**Objectives**
Compose a well-developed, MLA-formatted, analytical essay, engaging with primary source(s) and using proper documentation.

# ENG261 - World Literature I

## Overview

**Course Description**
This course introduces selected works from the Pacific, Asia, Africa, Europe, and the Americas from their literary beginnings through the seventeenth century. 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.

## Credit Hours

3

## Requisites

**Simple Requisites**

**State prerequisite**
**Type**
Prerequisite

Take One: ENG-112, ENG-113, or ENG-114

Take ENG-112(S13681) ENG-113 or ENG-114(S13706);

## Student Learning Outcomes

**Objectives**
Interpret and discuss, both orally and in writing, the works of major world writers of the Ancient Period, Middle Period, and Early Modern Period.

**Objectives**
Demonstrate understanding of the cultural, intellectual, and historical context of major world texts.

**Objectives**
Examine distinctions between sacred and secular texts.

**Objectives**
Compare themes in literary works from different cultures and periods.

**Objectives**
Trace the development of themes and genres within their historical contexts.

**Objectives**
Use the styles of major writers to analyze literary works for their aesthetic features and thematic patterns.

**Objectives**
Identify and discuss styles, themes, and works of major writers.

**Objectives**
Research and evaluate critical approaches to literature while distinguishing between critical and popular reception of works of major writers.

**Objectives**
Compose a well-developed, MLA-formatted, analytical essay, engaging with primary source(s) and using proper documentation.

# ENG262 - World Literature II

## Overview

**Course Description**
This course introduces selected works from the Pacific, Asia, Africa, Europe, and the Americas from the eighteenth century 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.

## Credit Hours

3

## Requisites

**Simple Requisites**

**State prerequisite**
**Type**
Prerequisite

Take One: ENG-112, ENG-113, or ENG-114

Take ENG-112(S13681) ENG-113 or ENG-114(S13706);

## Student Learning Outcomes

**Objectives**
Interpret and discuss, both orally and in writing, the works of major world writers in the context of literary periods (Enlightenment, Romanticism, Realism, and/or Modernism).

**Objectives**
Demonstrate understanding of the social, religious, political, and intellectual contexts of major literary works.

**Objectives**
Trace the development of themes and genres within their historical contexts.

**Objectives**
Use the styles of major writers to analyze literary works for their aesthetic features and thematic patterns.

**Objectives**
Identify and discuss styles, themes, and works of major writers.

**Objectives**
Research and evaluate critical approaches to literature while distinguishing between critical and popular reception of works of major writers.

**Objectives**
Compose a well-developed, MLA-formatted, analytical essay, engaging with primary source(s) and using proper documentation.

# ENG273 - African-American Literature

## Overview

**Course Description**
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.

### Credit Hours
3

### Requisites
**Simple Requisites**

**State prerequisite**
**Type**
Prerequisite

Take One: ENG-112, ENG-113, or ENG-114

Take ENG-112(S13681) ENG-113 or ENG-114(S13706);

## ENG8025 - College English Skills

### Overview
**Course Description**
This course provides the skills necessary for success in college English courses. Topics include reading and writing processes and strategies, such as critical thinking, text analysis, idea development, and application of writing conventions. Upon completion, students should be able to analyze readings and produce unified, coherent, well-developed paragraphs and essays using appropriate document design and standard written English while developing positive academic habits, learning strategies, and a growth mindset.

### Credit Hours
0

## ENG8045 - English Skills Support

### Overview
**Course Description**
This course provides academic support for the successful completion of gateway English courses by supplementing and reinforcing classroom instruction in ENG 8025. Emphasis is placed on developing a growth mindset, expanding skills in active reading and writing processes, applying editing and revision strategies, exercising standard writing conventions through contextualized instruction, and ethically using appropriate technology when reading and writing.

### Credit Hours
0

## FIP3124 - NFPA1403 Live Burn Compliance

### Overview
**Course Description**
This course covers current NFPA 1403 Standard on Live Fire Training Evolutions compliance training required before a firefighter can participate in a live fire or live burn training exercise. This is not a live burn training event; it is NFPA 1403 compliance training critical to firefighter safety.

### Credit Hours
0

## FRE111 - Elementary French I

### Overview
**Course Description**
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.

### Credit Hours
3

**Course Typically Offered**
Fall

### Student Learning Outcomes

**Objectives**
Understand and use familiar everyday expressions and basic phrases needed to meet communicative needs for survival and necessity in a Francophone area of the world.

**Objectives**
Introduce yourself and others in French.

**Objectives**
Ask and answer questions about personal and family information.

**Objectives**
Talk about your weekly and daily routines

**Objectives**
Talk about hobbies and interests

**Objectives**
Have a basic conversation with a speaker of French who is accustomed to speaker of French as a second/ foreign language

**Objectives**
Interact with cultural competence and understanding by using the language to investigate, explain and reflect on the relationship(s) between practices and perspectives of the cultures studied

# FRE112 - Elementary French II

## Overview

**Course Description**
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.

## Credit Hours

3

**Course Typically Offered**
Spring

## Requisites

**Simple Requisites**

**State prerequisite**
**Type**
Prerequisite

Take FRE-111

Take FRE-111;

## Student Learning Outcomes

**Objectives**
Present narratives in the present and past tenses

**Objectives**
Describe and navigate the world around them

**Objectives**
Discuss food, diet, & dining

**Objectives**
Discuss professions and personality traits

**Objectives**
Discuss the Arts

**Objectives**
Have basic conversations with French speakers who are accustomed to speakers of French as a second/foreign language

**Objectives**
Interact with cultural competence and understanding by using the language to investigate, explain and reflect on the relationship(s) between practices and perspectives of the cultures studied

# FRE211 - Intermediate French I

## Overview

**Course Description**
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.

## Credit Hours

3

**Course Typically Offered**
Fall

## Requisites

**Simple Requisites**

**State prerequisite**
**Type**
Prerequisite

Take FRE-112

Take FRE-112;

# FRE212 - Intermediate French II

## Overview

**Course Description**
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.

## Credit Hours

3

## Requisites

**Simple Requisites**

**State prerequisite**
**Type**
Prerequisite

Take FRE-211

Take FRE-211;

# FST100 - Introduction to Foodservice

## Overview

**Course Description**
This course is designed to develop an understanding of the foodservice industry, its terminology, mathematics, and measurements. Emphasis is placed on employability skills, vocabulary, and culinary math including fractions, ratio and proportion, and percents. Upon completion, students should be able to identify career paths, convert recipes, and differentiate standard measurements.

## Credit Hours

3

**Course Typically Offered**
Fall, Spring

# FST101 - Quantity Baking I

## Overview

**Course Description**
This course introduces fundamental concepts, skills, and techniques in quantity baking. Topics include yeast and quick breads, cookies, cakes, and other baked goods. Upon completion, students should be able to prepare and evaluate baked products.

## Credit Hours

3

**Course Typically Offered**
Fall, Spring

## Requisites

**Simple Requisites**

**State concurrent or previous courses**
**Type**
Corequisite

Take One: FST-103 or CUL-110

Take FST-103(S22867) or CUL-110(S22835);

# FST102 - Foodservice Skills I

## Overview

**Course Description**
This course introduces the concepts, skills, and techniques for volume food production in an institutional or commercial setting. Emphasis is placed on knife skills, tool and equipment handling, and applying principles of basic hot and cold food preparation. Upon completion, students should be able to demonstrate entry-level skills for foodservice operations.

## Credit Hours

8

**Course Typically Offered**
Fall, Spring

## Requisites

**Simple Requisites**

**State concurrent or previous courses**
**Type**
Corequisite

Take One: FST-103 or CUL-110

Take FST-103(S22867) or CUL-110(S22835);

# FST103 - Foodservice Sanitation

## Overview

**Course Description**
This course provides practical experience with the basic principles of safety and sanitation in the foodservice industry. Emphasis is placed on personal hygiene habits, safety regulations, and food handling practices (H.A.C.C.P.) that protect the health of the consumer. Upon completion, students should be able to demonstrate appropriate safety and sanitation practices required in the foodservice industry.

## Credit Hours

2

**Course Typically Offered**
Fall, Spring

# FST103A - Foodservice Sanitation Lab

## Overview

**Course Description**
This course provides a laboratory experience for enhancing student skills in the basic principles of sanitation and safety in the foodservice industry. Emphasis is placed on the practical experiences that enhance personal hygiene habits, safety regulations, and food handling practices that protect the health of the consumer. Upon completion, students should be able to demonstrate the application of sanitation and safety production procedures in foodservice operations.

## Credit Hours

1

**Course Typically Offered**
Fall, Spring

## Requisites

**Simple Requisites**

**State concurrent or previous courses**
**Type**
Corequisite

Take One: FST-103 or CUL-110

Take FST-103(S22867) or CUL-110(S22835);

# GEL111 - Geology

## Overview

**Course Description**
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.

### Credit Hours
4

**Course Typically Offered**
Fall, Spring, Summer

### Student Learning Outcomes

**Objectives**
Explain fundamental geologic concepts including earth structure, plate tectonics, rocks and minerals, rock cycle, crustal deformation, surficial processes, earth resources and geohazards.

**Objectives**
Apply the basic methods of scientific inquiry in the context of geology.

**Objectives**
Recognize and quantify the operation of Earth system processes over geologic and human timescales and over local, regional and global spatial scales.

**Objectives**
Manipulate, interpret and construct visualizations of geologic data using maps, graphs, and contemporary technology.

**Objectives**
Demonstrate an appreciation for the societal relevance of geology and the impact of humans on the earth system.

## GEL113 - Historical Geology

### Overview

**Course Description**
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.

### Credit Hours
4

### Requisites

**Simple Requisites**

**State prerequisite**
**Type**
Prerequisite

Take One: GEL-111 or GEL-120

Take GEL-111(S12347) or GEL-120;

## GEL230 - Environmental Geology

### Overview

**Course Description**
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.

### Credit Hours
4

### Requisites

**Simple Requisites**

**State prerequisite**
**Type**
Prerequisite

Take One: GEL-111, GEL-120, or PHS-130

Take GEL-111(S12347) GEL-120 or PHS-130;

## GEO111 - World Regional Geography

### Overview

**Course Description**
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.

### Credit Hours
3

## GRO120 - Intro to Gerontology

### Overview

**Course Description**
This course introduces the psychological, social, and biological aspects of aging. Emphasis is placed on common mental, social, and physical changes that occur during the aging process. Upon completion, students should be able to recognize the aging process and its psychological, social, and biological aspects.

### Credit Hours
3

**Course Typically Offered**
Fall

## HEA110 - Personal Health/Wellness

### Overview
**Course Description**
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.

### Credit Hours
3

**Course Typically Offered**
Fall, Spring, Summer

### Student Learning Outcomes

**Objectives**
Recognize and apply the basic concepts and principles of lifelong personal health and wellness.

**Objectives**
Assess and compare their personal lifestyle in contrast to those suggested by the health and medical field.

**Objectives**
Develop a personal diet strategy conducive to optimal health.

**Objectives**
Develop a personal exercise strategy conductive to optimal health.

**Objectives**
Implement personal safety habits which will improve their changes for longevity and productivity.

## HEA112 - First Aid & CPR

### Overview
**Course Description**
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.

### Credit Hours
2

**Course Typically Offered**
Fall, Spring

### Student Learning Outcomes

**Objectives**
Demonstrate skill in providing emergency care for the sick and injured until advanced medical help is obtained.

**Objectives**
Recognize, manage, and assist individuals suffering heart attack, cardiac arrest, burns, wounds, broken bones, bleeding, breathing difficulties, allergic reactions, life-threatening injury, survival in remote areas, and be able to react with confidence and skill to emergency situations.

## HFS110 - Exercise Science

### Overview
**Course Description**
This course is a survey of scientific principles, methodologies, and research as applied to exercise and physical adaptations to exercise. Topics include the basic elements of kinesiology, biomechanics, and motor learning. Upon completion, students should be able to identify and describe physiological responses and adaptations to exercise.

### Credit Hours
4

**Course Typically Offered**
Fall, Spring

### Student Learning Outcomes

**Objectives**
Identify human musculoskeletal anatomy structure and function.

**Objectives**
Explain concepts as it relates to Exercise Physiology

**Objectives**
Explain basic kinesiology principles including concepts from kinesiology, biomechanics, and motor learning.

**Objectives**
Identify and describe basic nutrition concepts and their relationship to exercise.

**Objectives**
Explain the physiology associated with exercise training.

## HFS111 - Fitness & Exercise Testing I

### Overview

**Course Description**
This course introduces the student to graded exercise testing. Topics include various exercise testing protocols with methods for prescribing exercise programs based on exercise tolerance tests and the use of various equipment and protocols. Upon completion, students should be able to conduct specific exercise tests and the use of various equipment.

### Credit Hours

4

**Course Typically Offered**
Fall

### Student Learning Outcomes

**Objectives**
Administer and analyze the results of various health and fitness surveys to determine a client's readiness to participate in an exercise program.

**Objectives**
Administer a battery of physical fitness assessments to determine a client's current state of physical fitness.

**Objectives**
Utilize assessment data in order to facilitate client goal setting and program development.

## HFS116 - Prevention & Care of Exercise Injuries

### Overview

**Course Description**
This course provides information about the care and prevention of exercise injuries. Topics include proper procedures, prevention techniques, and on-site care of injuries. Upon completion, students should be able to demonstrate the knowledge and skills necessary to prevent and care for exercise related injuries.

### Credit Hours

3

**Course Typically Offered**
Fall, Spring

### Student Learning Outcomes

**Objectives**
Discuss the biomechanical principles for the performance of common physical activities (e.g., walking, running, swimming, cycling, resistance training, yoga, Pilates, functional training).

**Objectives**
Explain the physiologic principles related to warm-up and cool-down.

**Objectives**
Explain the concept of reversibility of conditioning and its implications in fitness programs.

**Objectives**
List physical and psychological signs of overtraining and identify recommendations for these problems.

**Objectives**
Identify the major muscles. Major muscles include, but are not limited to, the following: trapezius, pectoralis major, latissimus dorsi, biceps, triceps, rectus abdominis, internal and external obliques, erector spinae, gluteus maximus, quadriceps, hamstrings, adductors, abductors, and gastrocnemius.

**Objectives**
Identify the major bones. Major bones include, but are not limited to, the clavicle, scapula, sternum, humerus, carpals, ulna, radius, femur, fibula, tibia, and tarsals.

**Objectives**
Identify the various types of joints of the body (e.g., hinge, ball, and socket).

**Objectives**
Describe the primary action and joint range of motion for each major muscle group.

**Objectives**
Locate the anatomic landmarks for palpation of peripheral pulses.

**Objectives**
Identify the categories of participants who should receive medical clearance before administration of an exercise test or participation in an exercise program.

**Objectives**
Obtain a basic health history and risk appraisal and to stratify risk in accordance with ACSM Guidelines.

**Objectives**
Explain and obtain informed consent.

**Objectives**
Explain pre-activity fitness testing, including assessments of cardiovascular fitness, muscular strength, muscular endurance, flexibility, and body composition.

**Objectives**
Recognize postural abnormalities that may affect exercise performance.

**Objectives**
Display skill in assessing body alignment.

**Objectives**
Identify common orthopedic and cardiovascular considerations for older participants and describe modifications in the exercise prescription.

**Objectives**
Acquire Skill to teach and demonstrate appropriate exercises for improving range of motion of all major joints.

**Objectives**
Acquire Skill in the use of various methods for establishing and monitoring levels of exercise intensity, including heart rate, RPE, and metabolic equivalents (METs).

**Objectives**
Recognize and apply methods used to monitor exercise intensity, including heart rate and rating of perceived exertion.

**Objectives**
Identify proper and improper technique in the use of resistive equipment, such as stability balls, weights, bands, resistance bars, and water exercise equipment.

**Objectives**
Identify proper and improper technique in the use of cardio-vascular conditioning equipment (e.g., stair-climbers, stationary cycles, treadmills, and elliptical trainers).

**Objectives**
Evaluate, prescribe, and demonstrate appropriate flexibility exercises for all major muscle groups.

**Objectives**
Explain the importance of maintaining normal hydration before, during, and after exercise.

**Objectives**
List basic precautions taken in an exercise setting to ensure participant safety.

**Objectives**
Define the following terms: shin splints, sprain, strain, tennis elbow, bursitis, stress fracture, tendonitis, patello- femoral pain syndrome, low back pain, plantar fasciitis, and rotator cuff tendonitis.

**Objectives**
Identify hypothetical concerns and potential risks that may be associated with the use of exercises such as straight-leg sit-ups, double leg raises, full squats, hurdler's stretch, yoga plow, forceful back hyper-extension, and standing bent-over toe touch.

**Objectives**
Explain potential musclo-skeletal injuries (e.g., contusions, sprains, strains, fractures), cardiovascular/ pulmonary complications (e.g., tachycardia, bradycardia, hypotension/hypertension, tachypnea), and metabolic abnormalities (e.g. fainting/syncope, hypoglycemia/hyperglycemia, hypothermia/hyperthermia).

**Objectives**
Display Skill in demonstrating appropriate emergency procedures during exercise testing and/or training.

**Objectives**
Identify the components that contribute to the maintenance of a safe exercise environment.

**Objectives**
Assist or spot a client in a safe and effective manner during resistance exercise.

**Objectives**
Define the cardiovascular, respiratory, metabolic, and musculo-skeletal risk factors that may require further evaluation by medical or allied health professionals before participation in physical activity.

# HFS118 - Fitness Facility Management

## Overview

**Course Description**
This course provides information about the management and operation of health and fitness facilities and programs. Topics include human resources, sales and marketing, member retention, financial management, facility design and maintenance, and risk management. Upon completion, students should be able to demonstrate the knowledge and skills necessary to effectively manage a fitness facility.

## Credit Hours

4

**Course Typically Offered**
Fall, Summer

## Student Learning Outcomes

**Objectives**
Provide current information relating to a fitness and sport facility management

**Objectives**
Expose students to topics for troubleshooting working in a sports venue

**Objectives**
Build a special event from conception to execution and post event evaluation

# HFS120 - Group Exercise Instruction

## Overview

**Course Description**
This course introduces the concepts and guidelines of instructing exercise classes. Topics include program designs, working with special populations, and principles of teaching and monitoring physical activity. Upon completion, students should be able to demonstrate basic skills in instructing an exercise class and monitoring workout intensity.

## Credit Hours

3

**Course Typically Offered**
Fall, Spring

## Requisites

**Simple Requisites**

**State prerequisite**
**Type**
Prerequisite

Take HFS-110

Take HFS-110;

## Student Learning Outcomes

**Objectives**
Familiarize the students with the basics of group instruction including low impact aerobics, step aerobics, yoga, Pilates, and strength training. Additional classes will be introduced through the semester to include kick-boxing, water aerobics and indoor cycling. (SLO1)

**Objectives**
Explain how to incorporate safe, effective and efficient group exercise classes that include proper warm-up and cool-down; and appropriate aerobic intensity.

**Objectives**
Promote the ability to implement safety precautions and modifications to the various group exercise classes.

**Objectives**
Provide students the opportunity to experience various group exercise classes. Each student will also be able to observe and evaluate different group exercise instructors.

**Objectives**
Identify the knowledge and experience to assist in the achievement of obtaining a group exercise certification.

**Objectives**
Plan, develop and implement a group exercise session, with applicable lesson plan and handout.

**Objectives**
Evaluate a group exercise session.

# HFS210 - Personal Training

## Overview

**Course Description**
This course introduces the student to the aspects of personal (one-on-one) training. Topics include training systems, marketing, and program development. Upon completion, students should be able to demonstrate personal training techniques and competencies of same.

## Credit Hours

3

**Course Typically Offered**
Spring

## Requisites

**Simple Requisites**

**State prerequisite**
**Type**
Prerequisite

Take All: HFS-110 and HFS-111

Take HFS-110 HFS-111;

## Student Learning Outcomes

**Objectives**
Apply the knowledge, skills, and abilities of a competent, professional, personal trainer through the successful completion of at least one (1) certified personal trainer certification examination.

**Objectives**
Design, lead, and manage a one-on-one exercise training session with a client in a professional exercise setting.

**Objectives**
Evaluate, analyze, and critically critique the effectiveness of personal training sessions.

# HFS212 - Exercise Programming

## Overview

**Course Description**
This course provides information about organizing, scheduling, and implementation of physical fitness programs. Topics include programming for various age groups, competitive activities and special events, and evaluating programs. Upon completion, students should be able to organize and implement exercise activities in a competent manner.

## Credit Hours
3

**Course Typically Offered**
Spring

## Requisites
**Simple Requisites**

**State prerequisite**
**Type**
Prerequisite

Take HFS-110

Take HFS-110;

## Student Learning Outcomes

**Objectives**
Explain the implementation of corporate wellness programs, exercise programming for special populations, and safe and effective personal training practices.

**Objectives**
Apply knowledge of organizing and designing effective evidenced based exercise programs for clients who are diagnosed with chronic diseases and disabilities.

**Objectives**
Review peer-reviewed research and other credible sources to develop knowledge of a specific disease and/or disability.

**Objectives**
Develop a comprehensive paper that details the epidemiology, exercise modifications, and other special considerations needed when working with a client with a specific disease or disability.

**Objectives**
Design a presentation that will provide a synopsis of the information collected and organized in the research paper.

**Objectives**
Explain the design and implementation of corporate and worksite wellness programs.

**Objectives**
Organize and participate in a student wellness committee.

**Objectives**
Develop an evaluation tool to capture the needs and interests of clients.

**Objectives**
Work in groups to develop and implement an effective, needs specific program.

**Objectives**
Explain the implementation and design of exercise programs for individuals.

**Objectives**
Conduct and design individual exercise sessions for various clients.

**Objectives**
Design and present a comprehensive exercise program for clients.

# HFS218 - Lifestyle Change & Wellness

## Overview
**Course Description**
This course introduces health risk appraisals and their application to lifestyle changes. Topics include nutrition, weight control, stress management, and the principles of exercise. Upon completion, students should be able to conduct health risk appraisals and apply behavior modification techniques in a fitness setting.

## Credit Hours
4

**Course Typically Offered**
Fall, Summer

### Student Learning Outcomes

**Objectives**
Explain the concept of wellness, which incorporates the components of physical fitness, behavior modification, nutrition, stress, and prevention of disease.

**Objectives**
Introduced to basic fitness assessment and programming skills in order to build a base for advanced training in these areas.

**Objectives**
Use a 'coaching' model to facilitate lifestyle change for a client who is ready, willing and able to make positive changes.

## HIS111 - World Civilizations I

### Overview

**Course Description**
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.

### Credit Hours

3

**Course Typically Offered**
Fall, Spring, Summer

### Student Learning Outcomes

**Objectives**
Analyze significant political developments in World Civilizations before 1500

**Objectives**
Summarize cultural developments in pre-modern World Civilizations

**Objectives**
Describe the socio-economic developments in World Civilizations before 1500

## HIS112 - World Civilizations II

### Overview

**Course Description**
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.

### Credit Hours

3

**Course Typically Offered**
Fall, Spring, Summer

### Student Learning Outcomes

**Objectives**
Analyze significant political developments in World Civilizations since 1500

**Objectives**
Summarize cultural developments in modern World Civilizations

**Objectives**
Describe the socio-economic developments in World Civilizations since 1500

## HIS121 - Western Civilization I

### Overview

**Course Description**
This course introduces western civilization from pre-history to the early modern era. Topics include ancient Greece, Rome, and Christian institutions of the Middle Ages and the emergence of national monarchies in western Europe. Upon completion, students should be able to analyze significant political, socioeconomic, and cultural developments in early western civilization.

### Credit Hours

3

## HIS122 - Western Civilization II

### Overview

**Course Description**
This course introduces western civilization from the early modern era to the present. Topics include the religious wars, the Industrial Revolution, World Wars I and II, and the Cold War. Upon completion, students should be able to analyze significant political, socioeconomic, and cultural developments in modern western civilization.

### Credit Hours
3

## HIS131 - American History I

### Overview
**Course Description**
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.

### Credit Hours
3

**Course Typically Offered**
Fall, Spring, Summer

### Student Learning Outcomes

**Objectives**
Analyze significant political developments in early American history to the Civil War

**Objectives**
Summarize cultural developments in the first half of American history

**Objectives**
Describe the socio-economic developments in American history up to 1865

**Objectives**
Demonstrate increased intercultural knowledge and competence through a variety of global assignments

## HIS132 - American History II

### Overview
**Course Description**
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.

### Credit Hours
3

**Course Typically Offered**
Fall, Spring, Summer

### Student Learning Outcomes

**Objectives**
Analyze significant political developments in American history after the Civil War

**Objectives**
Summarize cultural developments in the second half of American history

**Objectives**
Describe the socio-economic developments in American history after 1865

**Objectives**
Demonstrate increased intercultural knowledge and competence through a variety of global assignments

## HIS151 - Hispanic Civilization

### Overview
**Course Description**
This course surveys the cultural history of Spain and its impact on the New World. Topics include Spanish and Latin American culture, literature, religion, and the arts. Upon completion, students should be able to analyze the cultural history of Spain and Latin America.

### Credit Hours
3

## HIS222 - African-American History I

### Overview
**Course Description**
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.

### Credit Hours
3

**Course Typically Offered**
Fall

### Student Learning Outcomes

**Objectives**
Detect and analyze key historical figures, locations, ideas, and events in early African-American history.

**Objectives**
Assess the socioeconomic and cultural environment and its influence on the course of early African-American history.

**Objectives**
Differentiate between the chronological sequence and the causal relation between events.

**Objectives**
Interpret both primary and secondary sources (including documents, cartoons, photographs, film, music, charts, and maps) effectively.

**Objectives**
Appraise the multiple perspectives essential to study of the historical era and controversies.

## HIS223 - African-American History II

### Overview

**Course Description**
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.

### Credit Hours

3

**Course Typically Offered**
Spring

### Student Learning Outcomes

**Objectives**
Detect and analyze key historical figures, locations, ideas, and events in later African-American history.

**Objectives**
Assess the socioeconomic and cultural environment and its influence on the course of later African-American History.

**Objectives**
Differentiate between the chronological sequence and the causal relation between events.

**Objectives**
Interpret both primary and secondary sources (including documents, cartoons, photographs, film, music, charts, and maps) effectively.

**Objectives**
Appraise the multiple perspectives essential to study of the historical era and controversies.

## HIS226 - The Civil War

### Overview

**Course Description**
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.

### Credit Hours

3

**Course Typically Offered**
Spring

### Student Learning Outcomes

**Objectives**
Aanalyze significant political developments in the United States of America during the era of the Civil War

**Objectives**
Summarize cultural developments in the USA during the Civil War Era

**Objectives**
Describe the socio-economic developments in the era of the American Civil War

## HIS236 - North Carolina History

### Overview

**Course Description**
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.

### Credit Hours

3

**Course Typically Offered**
Fall

### Student Learning Outcomes

**Objectives**
Understand the significant political developments in the history of North Carolina

**Objectives**
Comprehend the socioeconomic development of the state of North Carolina, from pre-colonial era to present

**Objectives**
Analyze the cultural developments throughout the history of North Carolina

## HIT110 - Introduction to Healthcare and HIM Management

### Overview

**Course Description**
This course introduces healthcare settings and the Health Information Management (HIM) professional's role in healthcare delivery systems. Topics include health information management operations in compliance with standards, regulations and accrediting body initiatives; 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.

### Credit Hours

3

**Course Typically Offered**
Fall, Spring

### Student Learning Outcomes

**Objectives**
Describe health care organizations from the perspective of key stakeholders.

**Objectives**
Identify policies and strategies to achieve data integrity.

**Objectives**
Utilize technologies for health information management.

**Objectives**
Identify human resource strategies for organizational best practices.

**Objectives**
Identify the key healthcare regulations and laws that impact HIM continuum.

**Objectives**
Identify and describe the classification systems used to capture coded data.

**Objectives**
Calculate HIM departmental data.

**Objectives**
Create graphical representation of healthcare data using Excel.

## HIT112 - Health Law and Ethics

### Overview

**Course Description**
This course covers the study of the judicial, legislative, and regulatory standards applicable to health care and health information processes. Topics include legal terminology, confidentiality, privacy, security, access and disclosure of health information, ethical implications, data stewardship, and the integrity of the legal health record. Upon completion, students should be able to apply policies, procedures and ethical standards in compliance with external forces.

### Credit Hours

3

**Course Typically Offered**
Fall, Spring, Summer

## Student Learning Outcomes

**Objectives**
Apply legal terminology, concepts and principles to the practice of HIM.

**Objectives**
Distinguish between the privacy and security rules of HIPAA.

**Objectives**
Explain the issues surrounding an ethical issue that reflects unbiased discussion on both sides of the issue.

**Objectives**
Apply policies and procedures surrounding issues of access and disclosure of protected health information.

**Objectives**
Identify the correct use of legal documents.

**Objectives**
Analyze policies and procedures to ensure organizational compliance with regulations and standards.

**Objectives**
Demonstrate effective listening, communication and problem-solving skills when working collaboratively with classmates.

**Objectives**
Demonstrate appropriate research methodologies

# HIT114 - Health Data Systems and Standards

## Overview

**Course Description**
This course covers concepts and techniques for managing and maintaining all health record formats including electronic health records (EHR). Topics include structure and use of health information including data collection and analysis, data sources/sets, archival systems, as well as quality and integrity of healthcare data. Upon completion, students should be able to determine compliance of health record content and governance standards within the health organization.

## Credit Hours

3

**Course Typically Offered**
Fall, Spring

## Student Learning Outcomes

**Objectives**
Describe health care organizations from the perspective of key stakeholders.

**Objectives**
Apply policies, regulations, and standards to the management of information.

**Objectives**
Identify policies and strategies to achieve data integrity.

**Objectives**
Determine compliance of health record content within the health organization.

**Objectives**
Describe components of data dictionaries and data sets.

**Objectives**
Calculate statistics for health care operations.

**Objectives**
Report health care data through graphical representations.

**Objectives**
Describe components of revenue cycle management and clinical documentation improvement.

**Objectives**
Evaluate compliance with regulatory requirements and reimbursement methodologies.

**Objectives**
Demonstrate compliance with external forces.

**Objectives**
Identify the core elements of clinical documentation required in a health record.

**Objectives**
Identify and list the appropriate elements needed for a physician query.

## HIT124 - Professional Practice Exp II

### Overview

**Course Description**
This course provides supervised and/or simulated health information technology clinical experience in healthcare settings. Emphasis is placed on practical application of HIM functions and core curriculum concepts. Upon completion, students should be able to apply health information theory to healthcare facility practices.

### Credit Hours

1

**Course Typically Offered**
Fall, Spring, Summer

### Student Learning Outcomes

**Objectives**
Explain how the various functions and units within the HIM department affect the overall operations of a healthcare facility.

**Objectives**
Demonstrate professional and practical skills in a HIM department

**Objectives**
Apply classroom learning to real-world scenarios during the practicum experience.

**Objectives**
Demonstrate non-clinical skills necessary to begin a career in healthcare.

**Objectives**
Evaluate the overall importance and impact of government and other organizations on the U.S. healthcare system.

## HIT211 - Diagnosis Coding and Reporting

### Overview

**Course Description**
This course covers diagnostic coding and sequencing utilizing the current version of the ICD code set for inpatient, outpatient and ambulatory care settings. Emphasis is placed on the rules and conventions of the ICD official coding guidelines in relation to anatomy, physiology and disease processes. Upon completion, students should be able to accurately assign and sequence diagnosis codes in compliance with the ICD official coding guidelines for reporting statistical data, patient outcomes and reimbursement methodologies.

### Credit Hours

3

**Course Typically Offered**
Fall, Spring

### Requisites

**Simple Requisites**

**Local Prerequisite**
**Type**
Prerequisite

Take BIO-163 or BIO-169 and MED-122

Take BIO-163 BIO-169(S11629) MED-122;

**Local Corequisite**
**Type**
Corequisite

Take HIT-226

Take HIT-226(S25691);

### Student Learning Outcomes

**Objectives**
Apply ICD-10-CM format and conventions. 2. Assign ICD-10-CM codes.

**Objectives**
Explain the notations and symbols found in diagnosis code sets.

**Objectives**
Apply inpatient and outpatient coding guidelines for proper code assignment.

**Objectives**
Interpret healthcare data and physician's notes to ensure that documentation supports codes determined.

**Objectives**
Apply the Official Guidelines for specialty coding: hypertension; neoplasms;poisonings; etc.

# HIT213 - Inpatient Procedure Coding & Reporting

## Overview

**Course Description**
This course covers the application of coding guidelines as applied to the reporting of inpatient procedures. Emphasis is placed on the rules and conventions of the ICD-PCS code set utilizing the index and tables, in relation to anatomy and physiology to assign principal and secondary procedure codes in hospital inpatient settings. Upon completion, students should be able to accurately assign procedural codes according to the official ICD-PCS coding guidelines and evaluate compliance with regulatory requirements and reimbursement methodologies.

## Credit Hours

2

**Course Typically Offered**
Fall, Spring

## Requisites

**Simple Requisites**

**Local Prerequisite**
**Type**
Prerequisite

Take BIO-163 or BIO-169 and MED-122

Take BIO-163 BIO-169(S11629) MED-122;

**Local Corequisite**
**Type**
Corequisite

Take HIT-226

Take HIT-226(S25691);

## Student Learning Outcomes

**Objectives**
Build the appropriate ICD-10-PCS code based on procedure coding guidelines.

**Objectives**
Describe the body system, body part characters, and how the two-character values relate to each other.

**Objectives**
Define the meaning of the root operation and the nine subgroupings of the root operations in the Medical and Surgical section.

**Objectives**
Define the seven different approach values used in ICD-10-PCS.

**Objectives**
Describe the device characters and the criteria for including a value for devices.

**Objectives**
Discuss the use of the qualifier as the last character in the ICD-10-PCS code

# HIT214 - Outpatient Procedure Coding/ Reporting

## Overview

**Course Description**
This course covers application of coding and reporting standards as they apply to Current Procedural Terminology (CPT) guidelines and principles. Emphasis is placed on application of the coding guidelines, in relation to anatomy and physiology, for ambulatory healthcare settings. Upon completion, students should be able to assign CPT/HCPCS procedural codes according to official guidelines and evaluate compliance with regulatory requirements and reimbursement methodologies.

## Credit Hours

2

**Course Typically Offered**
Spring, Summer

## Requisites

**Simple Requisites**

**State prerequisite**
**Type**
Prerequisite

Take HIT-211

Take HIT-211(S25704);

## Student Learning Outcomes

**Objectives**
Apply the general rules and guidelines for accurate coding assignments.

**Objectives**
Abstract pertinent clinical information.

**Objectives**
Describe the uses of modifiers

**Objectives**
Describe the documentation requirements for E/M coding.

**Objectives**
Apply general guidelines for HCPCS Level II coding assignment.

**Objectives**
Summarize regulatory requirements and reimbursement methodologies.

# HIT215 - Revenue Cycle Management

## Overview

**Course Description**
This course covers the revenue cycle management process used in all healthcare settings as they relate to national billing, compliance, and reporting requirements. Topics include clinical documentation improvement, prospective payment systems, billing processes and procedures, chargemaster maintenance, regulatory guidelines, fraud and abuse, reimbursement monitoring, 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.

## Credit Hours

2

**Course Typically Offered**
Fall, Spring

## Student Learning Outcomes

**Objectives**
Describe components of revenue cycle management and clinical documentation improvement 2.Evaluate revenue cycle processes 3. Evaluate compliance with regulatory requirements and reimbursement methodologies 4 .Validate assignment of diagnostic and procedural codes and groupings in accordance with official guidelines

# HIT217 - Quality & Data Analysis

## Overview

**Course Description**
This course covers the principles of quality assessment and improvement, including data analysis and decision making in healthcare. Topics include healthcare statistics, continuous quality improvement, data analysis and reporting techniques, quality and outcome metric monitoring. Upon completion, students should be able to compute healthcare statistics, abstract, analyze and report clinical data for organization-wide quality and performance improvement programs for compliance purposes.

## Credit Hours

3

**Course Typically Offered**
Fall, Spring

## Requisites

**Simple Requisites**

**State prerequisite**
**Type**
Prerequisite

Take MAT-152

Take MAT-152(S25431);

## Student Learning Outcomes

**Objectives**
This course is under development course SLOs have not yet been created/finalized.

# HIT218 - Management Principles in HIT

## Overview

**Course Description**
This course covers organizational management concepts as applied to healthcare settings. Topics include leadership skills, managing organizational change, best practices, decision-making, financial management, cultural diversity, ethics, consumer engagement, and workforce training. Upon completion, students should be able to apply management, leadership, and supervisory concepts to various healthcare settings.

### Credit Hours
3

**Course Typically Offered**
Fall

### Student Learning Outcomes

**Objectives**
Demonstrate fundamental leadership skills

**Objectives**
Identify the impact of organizational change

**Objectives**
Identify human resource strategies for organizational best practices

**Objectives**
Utilize financial management processes

**Objectives**
Examine behaviors that embrace cultural diversity

**Objectives**
Assess ethical standards of practice

**Objectives**
Identify processes of workforce training for health care organizations

## HIT220 - Electronic Health Records

### Overview

**Course Description**
This course covers EHR systems, design, implementation and application. Topics include EHR, informatics, information governance, health information exchange (HIE), 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.

### Credit Hours
2

### Student Learning Outcomes

**Objectives**
Apply policies, regulations, and standards to the management of health information

**Objectives**
Describe components of data dictionaries and data sets

**Objectives**
Utilize technologies for health information management

**Objectives**
Explain the concepts of data analytics and health informatics

**Objectives**
Describe the connection of data analytics and health informatics to the use of healthcare information systems

**Objectives**
Apply policies and procedures to the use of networks and security, including intranet and internet applications to facilitate the electronic health record (EHR), personal health record (PHR), public health, and other administrative applications

**Objectives**
Explain the concept of interoperability and the models, methods, benefits and barriers of health information exchange.

**Objectives**
Perform tasks in the planning, design, selection, implementation, integration, testing, evaluation and support for organization-wide information systems.

**Objectives**
Describe how Health Information Management (HIM) professionals can lead data and information governance efforts to improve patient health outcomes

## HIT221 - Lifecycle of Electronic Health Record

### Overview

**Course Description**
This course covers the concepts and features of an electronic health record (EHR) system in integrated delivery networks. Topics include administrative and clinical functions such as patient management, privacy and security aspects, clinical documentation and reporting, coding and billing, data management and analytics, CDSS and quality improvement, and implementation of electronic health record systems. Upon completion, students should be able to understand the principles of an EHR and how to utilize EHR software to improve the quality and efficiency of operations in healthcare.

### Credit Hours

3

**Course Typically Offered**
Fall, Spring, Summer

### Student Learning Outcomes

**Objectives**
Identify the core components of an electronic health record (EHR).

**Objectives**
Describe interoperability.

**Objectives**
Describe components of data dictionaries and data sets.

**Objectives**
Utilize technologies for health information management.

**Objectives**
Apply policies, regulations, and standards to the management of information

## HIT222 - Professional Practice Exp III

### Overview

**Course Description**
This course provides supervised and/or simulated health information technology clinical experience in healthcare settings. Emphasis is placed on practical application of HIM functions and core curriculum concepts. Upon completion, students should be able to apply health information theory to healthcare facility practices.

### Credit Hours

2

**Course Typically Offered**
Fall, Spring, Summer

### Student Learning Outcomes

**Objectives**
Describe how the various functions within a specific unit/department of the HIM department affects the healthcare facility as a whole.

**Objectives**
Demonstrate professional and practical skills in a HIM department

**Objectives**
Apply classroom learning to real-world scenarios during the practicum experience.

**Objectives**
Discuss the link between professionalism, professional growth, and personal growth.

**Objectives**
Demonstrate usage of multiple health information software applications; MediTech, Solcom, Tableau, Encoder and DrChrono.

**Objectives**
Demonstrate usage of proper ICD-10-CM/PCS, and CPT guidelines for correct code assignment.

**Objectives**
Demonstrate non-clinical soft skills to begin a career in healthcare.

## HIT225 - Healthcare Informatics

### Overview

**Course Description**
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.

### Credit Hours
3

**Course Typically Offered**
Spring

### Student Learning Outcomes

**Objectives**
Explain the use of classification systems, clinical vocabularies, and nomenclatures

**Objectives**
Apply health informatics concepts to the management of health information

**Objectives**
Describe research methodologies used in healthcare

**Objectives**
Describe the concepts of managing data

**Objectives**
Summarize standards for the exchange of health information

**Objectives**
Manage data within a database system

**Objectives**
Identify standards for exchange of health information

## HIT226 - Pathophysiology & Pharmacology

### Overview

**Course Description**
This course covers principles of disease and the associated pharmacological treatments. Emphasis is placed on physical signs and symptoms, prognoses, common complications and therapeutic options. Upon completion, students should be able to relate disease processes to physical signs and symptoms, prognosis, common complications and their management.

### Credit Hours
3

**Course Typically Offered**
Spring, Summer

### Requisites

**Simple Requisites**

**State prerequisite**
**Type**
Prerequisite

Take One: BIO-163 BIO-166 or BIO-169

Take BIO-163 BIO-166 or BIO-169(S11629);

### Student Learning Outcomes

**Objectives**
Define terminology common to the various body systems and disorders of the body systems.

**Objectives**
Discuss basic anatomy and physiology of various body systems.

**Objectives**
Identify important signs and symptoms associated with various body systems.

**Objectives**
Describe common diagnostics used to determine the type, cause, or both of various system disorders.

**Objectives**
Identify disorders of the various body systems.

**Objectives**
Describe the typical course and management of common body system disorders.

**Objectives**
Describe the effects of aging on the various systems and common disorders of the systems associated with aging.

## HIT280 - Health Information Management Capstone

### Overview

**Course Description**
This course integrates application of knowledge and skills learned in prior HIT courses and is designed to prepare students for professional roles in HIM and promote ethical standards of practice. Emphasis is placed on AHIMA domains and professional competencies, career services and preparation for the National Certification exam. Upon completion, students should be able to demonstrate competency in the entry-level domains and subdomains of health information management.

### Credit Hours

2

**Course Typically Offered**
Fall, Spring, Summer

### Requisites

**Simple Requisites**

**State prerequisite**
**Type**
Prerequisite

Take HIT-211

Take HIT-211(S25704);

### Student Learning Outcomes

**Objectives**
Analyze mock exam performance data to identify strengths and areas for improvement.

**Objectives**
Demonstrate competence of the 6 RHIT exam domains including: (1) Data Content, Structure, and Information Governance, (2) Access, Disclosure, Privacy and Security, (3) Data Analytics and Use, (4) Revenue Cycle Management, (5) Compliance, and (6) Leadership.

**Objectives**
Demonstrate usage of proper ICD-10-CM/PCS, and CPT guidelines for correct code assignment.

**Objectives**
Describe health care organizations from the perspective of key stakeholders.

**Objectives**
Demonstrate fundamental leadership skills.

**Objectives**
Identify human resource strategies for organizational best practices.

## HMT110 - Introduction to Healthcare Management

### Overview

**Course Description**
This course introduces the functions, practices, organizational structures, and professional issues in healthcare management. Emphasis is placed on planning, controlling, directing, and communicating within health and human services organizations. Upon completion, students should be able to apply the concepts of management within a healthcare service environment.

### Credit Hours

3

**Course Typically Offered**
Fall

### Student Learning Outcomes

**Objectives**
Apply concepts and theories used in health care management (HMT);

**Objectives**
Demonstrate proficiency in using materials and references, tools and/or technology central to HMT

**Objectives**
Discuss the perspectives and values of HMT;

**Objectives**
Demonstrate research concepts needed to critically analyze current HMT research and literature

**Objectives**
Integrate health care management theory with real world problems through the use of research and discussion

## HMT211 - Long-Term Care Administration

### Overview

**Course Description**
This course introduces the administration of long-term care facilities and services. Emphasis is placed on nursing home care, home health care, hospice, skilled nursing facilities, and other long-term care services. Upon completion, students should be able to distinguish between the different long-term care offerings, criteria for use, and benefits of the patient, resident, and participant.

### Credit Hours

3

**Course Typically Offered**
Spring

### Student Learning Outcomes

**Objectives**
Describe the needs and use of long term care in our society

**Objectives**
Contrast long term care policy in the past, the present and projecting future need

**Objectives**
Apply the laws, regulations and financing associated with the long term care industry to everyday practice

**Objectives**
Describe the long term care industries organizational structure

**Objectives**
Associate all long term care service points with how they work together to deliver quality care

**Objectives**
Discuss the essentials of effective management in the long term care industry

## HMT212 - Management of Healthcare Organizations

### Overview

**Course Description**
This course examines current issues affecting the management of healthcare delivery systems. Topics include current problems, changes, and challenges in the healthcare environment. Upon completion, students should be able to identify current health care issues and their impact on healthcare management.

### Credit Hours

3

**Course Typically Offered**
Spring

### Student Learning Outcomes

**Objectives**
Explain how healthcare is delivered in the United States

**Objectives**
Propose a holistic approach to health care delivery

**Objectives**
Discuss the evolution of U.S. health care delivery and current trends.

**Objectives**
Provide an overview of the health services professionals employed.

**Objectives**
Describe the differences and imbalances between services characterized in the U.S. health care system

**Objectives**
Explain the meaning of medical technology and discuss the main components of technology assessment.

**Objectives**
Explain financing and the various methods of reimbursement.

**Objectives**
Differentiate between different healthcare settings.

**Objectives**
Explain managed care.

**Objectives**
Discuss cost, access, and quality in healthcare and the challenges of vulnerable populations.

**Objectives**
Describe the development of legislative policy.

**Objectives**
Discuss health care reform.

# HMT220 - Healthcare Financial Management

## Overview

**Course Description**
This course covers the methods and techniques utilized in the financial management of healthcare programs. Topics include cost determination, pricing of services, financial statement analysis, forecasting/projections, third-party billing, reimbursement, Medicare, Medicaid, and budgeting. Upon completion, students should be able to interpret and apply the principles of financial management in a healthcare environment.

## Credit Hours

4

**Course Typically Offered**
Spring

## Requisites

**Simple Requisites**

**State prerequisite**
**Type**
Prerequisite

Take All: HMT-110 and ACC-120

Take HMT-110(S20232) ACC-120(S20278);

## Student Learning Outcomes

**Objectives**
Explain various finance concepts from a healthcare perspective.

**Objectives**
Discuss various revenue sources and reimbursement schemes and their impact on healthcare organizations.

**Objectives**
List classification, allocation, and activity based costing in healthcare organizations.

**Objectives**
Apply cost-volume-profit analysis, including computation of contribution margin, break-even points, margins of safety, and operating leverage.

**Objectives**
Demonstrate how technology is used to prepare budgets in healthcare.

**Objectives**
Explain revenue cycle and the importance of cash management for healthcare organizations.

**Objectives**
Dicsuss how debt and equity are used to finance healthcare operations.

**Objectives**
apply discounted cash flow analysis, including NPV, IRR, and ROI to healthcare capital projects.

**Objectives**
Analyze capital investment opportunities.

# HOR112 - Landscape Design I

## Overview

**Course Description**
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.

### Credit Hours
3

## HOR130 - Greenhouse Design

### Overview
**Course Description**
This course covers greenhouse facilities planning and equipment selection. Topics include types of greenhouses, location factors, materials, glazing selection, calculation of heating/cooling requirements, lighting, benches, and energy conservation. Upon completion, students should be able to demonstrate knowledge of material selection, facilities planning, equipment need selection, and appropriate calculations.

### Credit Hours
3

**Course Typically Offered**
Spring

### Student Learning Outcomes

**Objectives**
Evaluate a site for greenhouse placement.

**Objectives**
Evaluatie different greenhouse designs for appropriateness to desired function.

**Objectives**
Apply critical and creative thinking skills to solving management problems in the greenhouse environment.

**Objectives**
Select appropriate tools and technology to accomplish tasks specific to greenhouse design and installation.

**Objectives**
Estimate materials costs for various design projects.

**Objectives**
Source materials for greenhouse construction.

**Objectives**
Construct and maintaining various aspects of greenhouses and their associated systems, including irrigation and ventilation.

## HOR156 - Introduction to Ecological Landscaping

### Overview
**Course Description**
This course introduces the environmental, social, economic and regulatory aspects of ecological landscaping and land stewardship practices. Topics include the shift to functioning landscapes, ecosystem services, and natural communities with strong emphasis on emerging career opportunities. Upon completion, students should be able to identify the principles of landscaping centered on positive ecological outcomes.

### Credit Hours
3

## HOR168 - Plant Propagation

### Overview
**Course Description**
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.

### Credit Hours
3

**Course Typically Offered**
Fall

### Student Learning Outcomes

**Objectives**
Identify proper propagation methods for a variety of annual and perennial plants.

**Objectives**
Develop skills for successful application of common sexual and asexual propagation techniques.

**Objectives**
Competently use the tools, materials, substances, and environments for propagating plants.

**Objectives**
Recognize and solve rudimentary problems in the plant propagation process.

**Objectives**
Accurately document the plant propagation process using the vocabulary of propagation and plant nomenclature.

**Objectives**
Observe growth of plants and differentiate between factors affecting growth.

**Objectives**
Evaluate propagation success rates.

**Objectives**
Create a useful propagation guide appropriate for farm or nursery.

# HOR3307G1 - Greenhouse Design

## Overview

**Course Description**
Learn how to develop and design your own personal greenhouse. This course covers greenhouse facilities planning and equipment selection and will cover topics such as types of greenhouses, location factors, materials, glazing selection, calculation of heating/cooling requirements, lighting, benches, and energy conservation. Upon completion, students should be able to demonstrate knowledge of material selection, facilities planning, equipment need selection, and appropriate calculations. This is a parallel course to HOR-130 and offered in a curriculum environment.

## Credit Hours

| | **Credit Hours Max:** |
|---|---|
| 1 | 33 |

# HRM245 - Human Resource Management-Hospitality

## Overview

**Course Description**
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.

## Credit Hours

3

**Course Typically Offered**
Fall, Spring

## Student Learning Outcomes

**Objectives**
Objectively manage the interviewing, hiring, and evaluation of staff in restaurant and service operations.

**Objectives**
Navigate the nuances of the probationary period and the consideration of factors in staff performance, including attendance, customer service, teamwork, etc.

**Objectives**
Understand and maintain knowledge of the basic laws and regulations for hiring, recruiting, training, offering benefits, etc., in the hospitality industry in the time of COVID-19 (pre-, post-pandemic).

**Objectives**
Explore solutions for creative perks/ privileges for staff, both with and without financial impact.

**Objectives**
Understand and articulate social media for restaurants/food service/ hospitality industry businesses-managing social media profiles effectively.

**Objectives**
Constructively handle reviews of restaurant/food service business when faced with negative reviews and providing factual and measured responses.

# HSC110 - Orientation to Health Careers

## Overview

**Course Description**
This course is a survey of health care professions. Topics include professional duties and responsibilities, working environments, and career choices. Upon completion, students should be able to demonstrate an understanding of the health care professions and be prepared to make informed career choices.

## Credit Hours

1

## Student Learning Outcomes

**Objectives**
Identify various careers in the healthcare job profession

**Objectives**
Understand what professional duties and responsibilities are required to work in healthcare

**Objectives**
Have a better direction of where they would like to work in healthcare

# HSE110 - Introduction to Human Services

## Overview

**Course Description**
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.

## Credit Hours

3

**Course Typically Offered**
Fall, Spring

## Student Learning Outcomes

**Objectives**
Understand the role of the counselor; as a professional

**Objectives**
Analyze different code of ethics and discuss them with classmates

**Objectives**
Discuss the NC System of Social Services

**Objectives**
Explore basic skills: math, English, Microsoft Office products

**Objectives**
Define Mental health and review the DSM.

**Objectives**
Understand the major approaches to counseling

**Objectives**
Overview basic counseling skills and techniques

# HSE112 - Group Process I

## Overview

**Course Description**
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.

## Credit Hours

2

**Course Typically Offered**
Spring

## Student Learning Outcomes

**Objectives**
Understand the role of the counselor

**Objectives**
Learn about the group members

**Objectives**
Analyze the different code of ethics in group counseling

**Objectives**
Discuss Group Process and the Stages of Groups

**Objectives**
Understand the importance of planning

**Objectives**
Review methods of evaluation during session and at the closing.

## HSE123 - Interviewing Techniques for Human Services

### Overview

**Course Description**
This course covers the purpose, structure, focus, and techniques utilized in effective interviewing. Emphasis is placed on observing, attending, listening, responding, summarizing, and documenting with instructor supervision. Upon completion, students should be able to perform the basic interviewing skills needed to facilitate the helping relationship.

### Credit Hours

3

**Course Typically Offered**
Spring

### Student Learning Outcomes

**Objectives**
Demonstrate basic attending skills (both verbal and nonverbal)

**Objectives**
Demonstrate skills in listening, reflection (feelings and content), paraphrasing, summarization.

**Objectives**
Successfully identify and respond to client reported discrepancies during information gathering.

**Objectives**
Apply skills and show evidence of understanding each skill by using them correctly.

**Objectives**
Evaluate client resistance and productive ways to respond.

## HSE125 - Counseling

### Overview

**Course Description**
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.

### Credit Hours

3

**Course Typically Offered**
Spring

### Student Learning Outcomes

**Objectives**
Understand the major approaches to psychotherapy and counseling

**Objectives**
Explain the differing theories that are foundational in the practice of counseling.

**Objectives**
Successfully demonstrate basic counseling techniques

**Objectives**
Explore basic counseling terminology, techniques, and skills

## HSE135 - Orientation Lab I

### Overview

**Course Description**
This course is designed to promote professional, program, and personal identification with the human services field. Emphasis is placed on interpersonal communication, verbal and non-verbal interactions, and team building. Upon completion, students should be able to identify with the human services profession and demonstrate basic team-building skills.

### Credit Hours

1

**Course Typically Offered**
Fall, Spring, Summer

# HSE210 - Diversity, Ethics, and Trends in Human Services

## Overview

**Course Description**
This course is designed to provide students with an in-depth understanding of the role of diversity and ethical considerations within the human services profession. Emphasis is placed on the knowledge and skills in the evolving landscape of human services. Upon completion, students should be able to apply ethical decision-making, demonstrate an understanding of diverse perspectives, and identify current trends in the human services field.

## Credit Hours

3

**Course Typically Offered**
Spring

## Student Learning Outcomes

**Objectives**
Articulate important issues and trends in the human services professional field.

**Objectives**
Discuss legal and ethical issues in human services.

**Objectives**
Understand Current Trends and News, to make application to Social Services.

**Objectives**
Research, using the Internet, to find information on current issues

**Objectives**
understand the politics, policies, and strategies to resolve issues

**Objectives**
analyze the vast number of issues and find ways to be the solution.

# HSE212 - Group Dynamics

## Overview

**Course Description**
This course introduces the concepts of group processes and group dynamics. Emphasis is placed on essential tools for understanding, participating in, and contributing to group processes. Upon completion, students should be able to identify and explain how people are influenced by their interactions in group settings and facilitate various groups.

## Credit Hours

3

**Course Typically Offered**
Spring, Summer

## Student Learning Outcomes

**Objectives**
Recognize the fundamental principles of interpersonal communication and group dynamics.

**Objectives**
Demonstrate effective communication and leadership skills through learning group theory and counseling skills and techniques, then applying the skills by leading a group session during the class meeting.

**Objectives**
Design and facilitate group activities that promote effective communication and teamwork.

**Objectives**
Develop ethical communication guidelines for promoting inclusivity in group interactions.

# HSE220 - Case Management

## Overview

**Course Description**
This course covers a variety of tasks associated with professional case management. Topics include needs assessment, service planning, referral procedures, documentation, 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.

## Credit Hours

3

**Course Typically Offered**
Fall

# HSE223 - Counseling Theories & Skills

## Overview

**Course Description**
This course provides an in-depth exploration of foundational theories and practical techniques essential for those working in diverse human services settings. Emphasis is placed on self-awareness, problem-solving, decision-making, and personal growth. Upon completion, students should be able to apply these theories to real-life scenarios, and develop professional skills crucial for fostering supportive relationships in various settings.

## Credit Hours

3

**Course Typically Offered**
Spring

## Student Learning Outcomes

**Objectives**
Develop strategies for maintaining professional boundaries.

**Objectives**
Describe the foundational theories of counseling.

**Objectives**
Demonstrate proficiency in basic intervention skills and strategies.

**Objectives**
Apply different counseling theories to diverse client populations and presenting issues.

# HSE225 - Crisis and Intervention Principles

## Overview

**Course Description**
This course introduces the types of crises and the principles of intervention. Emphasis is placed on identifying culturally competent techniques for intervening in various crisis situations. Upon completion, students should be able to assess crisis situations and respond effectively.

## Credit Hours

3

**Course Typically Offered**
Fall

## Student Learning Outcomes

**Objectives**
Define and discuss crisis intervention characteristics, theories, and applications

**Objectives**
Explain basic crisis intervention skills

**Objectives**
Identify factors involved in handling specific crises

**Objectives**
Assess crisis situations and respond appropriately

**Objectives**
Develop an understanding of posttraumatic stress disorder

**Objectives**
Summarize the complexity of violent behavior in the workplace

**Objectives**
Explain multicultural influences on crisis and its intervention

# HUM110 - Technology and Society

## Overview

**Course Description**
This course considers technological change from historical, artistic, and philosophical perspectives and its effect on human needs and concerns. Emphasis is placed on the causes and consequences of technological change. Upon completion, students should be able to critically evaluate the implications of technology.

## Credit Hours

3

**Course Typically Offered**
Fall, Spring, Summer

### Student Learning Outcomes

**Objectives**
Identify major technological changes in Western culture from historical, artistic and philosophical perspectives.

**Objectives**
Discuss technological developments in their historical context.

**Objectives**
Evaluate the impact of technology on society and the individual.

**Objectives**
Analyze the relationship between the dynamics of technological change and social, economic, political, and cultural phenomena.

**Objectives**
Examine ethical implications of technology for society and the individual.

**Objectives**
Compare and explain the present state of technology and its history.

**Objectives**
Identify different philosophical perspectives on the value of technology.

**Objectives**
Evaluate new developments in technology and consider the possible courses of future technological development.

## HUM115 - Critical Thinking

### Overview

**Course Description**
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.

### Credit Hours

3

## HUM120 - Cultural Studies

### Overview

**Course Description**
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.

### Credit Hours

3

**Course Typically Offered**
Fall, Spring

## HUM122 - Southern Culture

### Overview

**Course Description**
This course explores the major qualities that make the South a distinct region. Topics include music, politics, literature, art, religion, race relations, and the role of social class in historical and contemporary contexts. Upon completion, students should be able to identify the characteristics that distinguish Southern culture.

### Credit Hours

3

**Course Typically Offered**
Fall, Spring

### Student Learning Outcomes

**Objectives**
Assess the distinctiveness of the South as a region.

**Objectives**
Discuss the social, historical, and religious context of the Southern culture.

**Objectives**
Analyze the evolution of systems of social class in the South.

**Objectives**
Explain the changing role of gender and the changing nature of the family in the South.

**Objectives**
Analyze the development of Southern racial policies and practices, including slavery and segregation.

**Objectives**
Detect the influences of class and race on southern politics and some styles of politics in the South.

**Objectives**
Classify examples of southern "creativity" which reflect the region's cultural distinctiveness.

**Objectives**
Explain how these concepts have impacted and continue to impact women.

**Objectives**
Distinguish between the similarities and the differences in women's lives from the various social spheres.

**Objectives**
Propose and defend ideas to challenge social institutions and practices that marginalize, subordinate and devalue particular groups of people.

## HUM150 - American Women's Studies

### Overview

**Course Description**
This course provides an inter-disciplinary study of the history, literature, and social roles of American women from Colonial times to the present. Emphasis is placed on women's roles as reflected in American language usage, education, law, the workplace, and mainstream culture. Upon completion, students should be able to identify and analyze the roles of women as reflected in various cultural forms.

### Credit Hours

3

**Course Typically Offered**
Spring, Summer

### Student Learning Outcomes

**Objectives**
Describe the historical background of women's lives across the various spheres.

**Objectives**
Discuss the work of American women who have made major humanitarian, political, scientific, or cultural contributions to society.

**Objectives**
Give examples of how class, race, age and gender identities are societal constructions and detect the factors that influence the creation and adaptation of these constructions in women's lives.

## HUM160 - Introduction to Film

### Overview

**Course Description**
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.

### Credit Hours

3

### Student Learning Outcomes

**Objectives**
Recall and apply a basic technical and critical vocabulary of motion pictures.

**Objectives**
Summarize and explain the relevance of important moments in American film history.

**Objectives**
Distinguish between film genres and recognize how some of the most popular genres express cultural and social tensions.

**Objectives**
Describe economic aspects of the film industry and point out their historical and current influence on American society.

**Objectives**
Defend the role of film in shaping and reflecting American culture.

**Objectives**
Appraise and question their roles as passive viewers and evaluate their ability to watch films actively and critically through oral and written assignments.

**Objectives**
Compose critical analyses of Hollywood films by using cinematic language.

## HUM211 - Humanities I

### Overview

**Course Description**
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.

### Credit Hours

3

### Requisites

**Simple Requisites**

**State prerequisite**
**Type**
Prerequisite

Take ENG-111

Take ENG-111(S24022);

## HUM220 - Human Values and Meaning

### Overview

**Course Description**
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.

### Credit Hours

3

### Requisites

**Simple Requisites**

**State prerequisite**
**Type**
Prerequisite

Take ENG-111

Take ENG-111(S13673);

## HUM230 - Leadership Development

### Overview

**Course Description**
This course explores the theories and techniques of leadership and group process. Emphasis is placed on leadership styles, theories of group dynamics, and the moral and ethical responsibilities of leadership. Upon completion, students should be able to identify and analyze a personal philosophy and style of leadership and integrate these concepts in various practical situations.

### Credit Hours

3

### Requisites

**Simple Requisites**

**State prerequisite**
**Type**
Prerequisite

Take ENG-111

Take ENG-111(S13673);

## HYD110 - Hydraulics/Pneumatics I

### Overview

**Course Description**
This course introduces the basic components and functions of hydraulic and pneumatic systems. Topics include standard symbols, pumps, control valves, control assemblies, actuators, FRL, maintenance procedures, and switching and control devices. Upon completion, students should be able to understand the operation of a fluid power system, including design, application, and troubleshooting.

### Credit Hours

3

**Course Typically Offered**
Summer

### Student Learning Outcomes

**Objectives**
Build fluid power curicuts on suitcase trainers

**Objectives**
Disassemble, identify, & reassemble reservoirs, valves, actuators, & pumps

**Objectives**
Compare differences of fluid power transfer components

**Objectives**
Identify fitting types and applications for use

**Objectives**
Solve fluid pwer system equations

**Objectives**
Identify and demonstrate safe practices and procedures with tools, materials and industry accepted test equipment covered in the course.

**Objectives**
Demonstrate appropriate use of test equipment, evaluate circuit performance and apply appropriate troubleshooting techniques to fluid power systems.

**Objectives**
Identify components of fluid power systems using symbols and schematics.

**Objectives**
Assemble a fluid power system.

**Objectives**
Calculate and demonstrate the basic physics of fluid mechanics.

# HYD121 - Hydraulics/Pneumatics II

## Overview

**Course Description**
This course is a continuation of HYD 110 and provides further investigation into fluid power systems. Topics include advanced system components, troubleshooting, and other related topics. Upon completion, students should be able to demonstrate an understanding of the installation, application, operation, and maintenance of fluid power components and systems.

## Credit Hours
2

**Course Typically Offered**
Fall

## Requisites

**Simple Requisites**

**State prerequisite**
**Type**
Prerequisite

Take HYD-110

Take HYD-110(S10768);

## Student Learning Outcomes

**Objectives**
Design and draw fluid power systems to perform simple functions.

**Objectives**
Interpret hydraulic and pneumatic system symbols and schematics.

**Objectives**
Correctly connect hydraulic devices, using schematics, on a hydraulic system trainer.

**Objectives**
Identify components of a hydraulic or pneumatic system.

**Objectives**
Calculate piston area, piston volume, and pressures in a hydraulic system necessary to perform a specific function.

# INT110 - International Business

## Overview

**Course Description**
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.

### Credit Hours
3

## ISC110 - Workplace Safety

### Overview
**Course Description**
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.

### Credit Hours
1

**Course Typically Offered**
Fall, Spring, Summer

### Student Learning Outcomes

**Objectives**
Identify unsafe conditions or behavior in an industrial environment

**Objectives**
Demonstrate safe work practices in industry

**Objectives**
Identify and select appropriate personal protective equipment used in industry

**Objectives**
Demonstrate safe practices regarding fire protection, electrical, chemicals, PPE, material handling, tools, and machine safety.

**Objectives**
Write an explanation of proper safety procedures in the workplace or industry.

**Objectives**
Write in complete sentences with few major grammatical errors

## ISC112 - Industrial Safety

### Overview
**Course Description**
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.

### Credit Hours
2

**Course Typically Offered**
Fall, Summer

## ISC121 - Environmental Health & Safety

### Overview
**Course Description**
This course covers workplace environmental, health, and safety concepts. Emphasis is placed on managing the implementation and enforcement of environmental health and safety regulations and on preventing accidents, injuries, and illnesses. Upon completion, students should be able to demonstrate an understanding of basic concepts of environmental health and safety.

### Credit Hours
3

**Course Typically Offered**
Summer

### Student Learning Outcomes

**Objectives**
Demonstrate an understanding of basic concepts of environmental health and safety

## ISC129 - Quality Testing Lab Techniques

### Overview
**Course Description**
This course provides practical training in destructive and non-destructive testing techniques. Emphasis is placed on quality testing in industrial laboratories. Upon completion, students should be able to perform basic laboratory testing functions and complete test forms.

### Credit Hours
3

## ISC132 - Manufacturing Quality Control

### Overview
**Course Description**
This course introduces quality concepts and techniques used in industry. Topics include elementary statistics and probability, process control, process capability, and quality improvement tools. Upon completion, students should be able to demonstrate an understanding of the concepts and principles of quality and apply them to the work environment.

### Credit Hours
3

**Course Typically Offered**
Spring

## ISC175 - QA Fundamentals

### Overview
**Course Description**
This course is designed to increase fundamental knowledge in the philosophies, principles, and practice of quality in the work environment. Topics include the history and basics of quality, philosophies of quality, daily application of principles, and roles of quality professions, with emphasis on cGMP environment. Upon completion, students should be able to discuss quality fundamentals, components of quality systems, and identify standards and programs of quality.

### Credit Hours
1

**Course Typically Offered**
Summer

### Student Learning Outcomes

**Objectives**
Discuss quality fundamentals in the cGMP environment

**Objectives**
Identify components of a quality system

**Objectives**
Recognize quality standards and programs

## ISC221 - Statistical Quality Control

### Overview
**Course Description**
This course covers the principles and techniques of statistical process control for the improvement of productivity. Emphasis is placed on basic statistics for quality control, organization and procedures for efficient quality control including inspections, process control, and tests of significance. Upon completion, students should be able to apply statistical principles and techniques to enhance production.

### Credit Hours
3

**Course Typically Offered**
Spring

### Student Learning Outcomes

**Objectives**
Develop an understanding of management principles involving product quality

**Objectives**
Analyze and interpret data related to quality monitoring

**Objectives**
Understand the principles of statistical techniques as applied to process and product design, and quality improvement

**Objectives**
Identify various available statistical tools of quality monitoring

**Objectives**
Understand and use various available statistical tools for quality monitoring

**Objectives**
Understand the principles and tools used in Lean Manufacturing and Six Sigma

## ISC278 - cGMP Quality Systems

### Overview
**Course Description**
This course focuses on the development, implementation, and ongoing maintenance of a quality system in a cGMP environment. Topics include the cGMP standard, components of cGMP quality systems, quality function roles and training, development of documentation such as SOPs, and system review procedures. Upon completion, students should be able to identify the components of a quality system and develop a quality system manual utilizing the cGMP standard.

### Credit Hours
2

**Course Typically Offered**
Fall

### Student Learning Outcomes

**Objectives**
Discuss components of cGMP quality systems

**Objectives**
Identify quality function roles and training

**Objectives**
Create and use cGMP documents like SOPs

**Objectives**
Develop a quality system manual utilizing the cGMP standard

## ISC280 - Validation Fundamentals

### Overview

**Course Description**
This course covers the fundamental concepts of components of a validation program in a cGMP environment. Emphasis is placed on FDA requirements concerning validation, types of validation, documentation, procedures, and the QA role. Upon completion, students should be able to discuss the purpose of validation, identify the steps in the validation process, and effectively utilize sample documentation.

### Credit Hours

2

**Course Typically Offered**
Spring

### Student Learning Outcomes

**Objectives**
Demonstrate an understanding of the concept of validation.

**Objectives**
Demonstrate an understanding of the regulatory compliance needed to validate a pharmaceutical processing room or equipment.

**Objectives**
Recall key components of the process validation guidance document.

**Objectives**
Describe equipment and systems qualification

**Objectives**
Discuss how to implement best practices in your current pharmaceutical firm.

**Objectives**
Describe the structure of a validation program

**Objectives**
Demonstrate best practices in the validation process.

**Objectives**
Apply and interview with confidence for an entry-level validation technician job at a North Carolina pharmaceutical or biotechnology company.

## LEO111 - Lasers and Applications

### Overview

**Course Description**
This course covers the basic principles of laser operations and applications with a particular emphasis on laser safety. Topics include the properties of laser light, laser components, laser beam characteristics, and laser safety. Upon completion, students should be able to make measurements of laser beam characteristics and conduct a safety audit and hazards analysis of a laser facility.

### Credit Hours

2

**Course Typically Offered**
Spring, Summer

### Requisites

**Simple Requisites**

**State concurrent or previous courses**
**Type**
Corequisite

Take MAT-122

Take MAT-122(S20805);

### Student Learning Outcomes

**Objectives**
Describe and discuss the nature and properties of light

**Objectives**
Discuss different types of light sources and describe their different properties

**Objectives**
Describe requirements for laser safety

**Objectives**
Discuss basic principles of lasers

**Objectives**
Identify and describe different lasers

**Objectives**
Accurately document in written format “How a Laser Works”.

# LEO211 - Photonics Technology

## Overview

**Course Description**
This course covers optical theory, optical equipment, optical components, and laser systems. Topics include generation and control of light using optical components such as lasers, lenses, mirrors, diffraction gratings, filters, and polarizers. Upon completion, students should be able to construct, analyze, verify, and troubleshoot optical systems using appropriate techniques and equipment.

## Credit Hours

7

**Course Typically Offered**
Fall

## Requisites

**Simple Requisites**

**State prerequisite**
**Type**
Prerequisite

Take ELN-133

Take ELN-133(S16330);

## Student Learning Outcomes

**Objectives**
Construct optical systems using proper optical alignment techniques

**Objectives**
Analyze optical systems for fault issues

**Objectives**
Operate optical systems and optical test equipment safely

**Objectives**
Perform Ray Tracing of an optical system; defining the location, orientation and size, of an image, given the location, orientation and size of an object.

**Objectives**
Verify Ray Tracing solutions of an optical system through calculations of the same optical system to determine the location, orientation and size, of an image, given the location, orientation and size of an object.

**Objectives**
Identify and plan needed optical components and materials per specifications required of the system

**Objectives**
Calibrate and properly maintain optical systems and optical equipment

**Objectives**
Properly clean and install optical components

**Objectives**
Create structured technical lab reports describing optics labs.

# LEO212 - Photonics Applications

## Overview

**Course Description**
This course provides knowledge and skills related to emerging photonics applications in North Carolina industry. Topics include applications such as materials processing, bar code scanning, surgical applications, optical data storage, and optical computers. Upon completion, students should be able to describe and analyze the critical issues attendant to a variety of photonics applications.

## Credit Hours
4

**Course Typically Offered**
Fall

## Requisites
**Simple Requisites**

**Local**
**Type**
Corequisite

LEO-211

Take LEO-211(S23496);

## Student Learning Outcomes

**Objectives**
Identify laser switching and relay systems.

**Objectives**
Explain the concept, structure, and operation of gas lasers, semiconductor lasers, fiber lasers and solid state lasers.

**Objectives**
Explain the energy diagram of a four level laser, including identifying the levels and their purpose, be able to explain the advantage of the both the Metastable State and having a Lower Lasing Level above the Ground State.

**Objectives**
Identify, and properly use correct laser measurement equipment.

**Objectives**
Identify and explain low power applications for gas lasers, semiconductor lasers, fiber laser and solid state lasers

**Objectives**
Identify and explain high power applications for gas lasers, semiconductor lasers, fiber lasers and solid state lasers

**Objectives**
Properly operate gas lasers, solid state lasers, fiber lasers and semiconductor lasers

**Objectives**
Analyze, troubleshoot and repair defective gas lasers, solid state lasers, fiber lasers and semiconductor laser defects

**Objectives**
Accurately create written “Standard Operating Procedures” (SOP’s) describing the operation of high powered lasers.

# LEO213 - Advanced Photonic Applications

## Overview
**Course Description**
This course covers advanced knowledge and skills related to industrial photonics applications in industry. Topics include applications such as light emitting diode (LED) semiconductor processing, LED photonics operational testing, fiber optics, and spectroscopy. Upon completion, students should be able to describe and analyze the critical issues attendant to a variety of photonics applications.

## Credit Hours
4

**Course Typically Offered**
Spring

## Requisites
**Simple Requisites**

**State concurrent or previous courses**
**Type**
Prerequisite

Take LEO-212

Take LEO-212(S23497);

## Student Learning Outcomes

**Objectives**
Identify and describe a fiber optic system block diagram

**Objectives**
Discuss advantages of fiber optic communication medium

**Objectives**
Identify, describe, and measure fiber characteristics

**Objectives**
Identify and discuss different fiber optic cables

**Objectives**
Identify and explain the operation, test and measure of fiber optic sources, detectors, transmitters, receivers, couplers, multiplexers, connectors, and splices

**Objectives**
Develop a fiber optic system power budget

**Objectives**
Identify, discuss and operate different types of fiber optic test equipment

**Objectives**
Identify and describe a semiconductor manufacturing and test process block diagram

**Objectives**
Discuss critical processing steps that significantly affect semiconductor device performance

**Objectives**
Measure LED critical parameters

**Objectives**
Measure thermal electric device critical parameters

**Objectives**
Describe a solid-state laser crystal manufacturing and test process block diagram

**Objectives**
Discuss critical processing steps that significantly affect solid-state laser crystal performance

**Objectives**
Measure solid-state laser crystal critical parameters

**Objectives**
Identify and discuss basic steps to consider as a field engineer for installation of photonic/laser systems

**Objectives**
Identify and explain main causes of photonic/laser system failures and possible solutions

**Objectives**
Identify and discuss proper customer relations procedures of a field engineer

**Objectives**
Discuss critical principles to consider in the design, build, manufacture, and test of a high energy pulsed solid-state laser

**Objectives**
Discuss the advantages of "flash-lamped" pumping versus "diode" pumping for a high energy pulsed solid-state laser

**Objectives**
Measure high energy pulsed solid-state laser critical parameters

**Objectives**
Define spectroscopy as used for detection and the benefits

**Objectives**
Using a block diagram, identify, describe and discuss different types of spectroscopy detection systems, including Raman Spectroscopy

**Objectives**
Discuss the different light energy sources used with different types of spectroscopy detection systems

**Objectives**
Measure spectrometer characteristics

**Objectives**
Create structured technical lab reports describing labs in the covered advanced photonic application areas.

## LEO222 - Photonics Applications Project

### Overview

**Course Description**
This course provides a structured approach to an applications-oriented photonics project. Emphasis is placed on selecting, planning, implementing, testing, and presenting the project. Upon completion, students should be able to present and demonstrate their photonics project.

### Credit Hours

2

**Course Typically Offered**
Spring

### Requisites

**Simple Requisites**

**State prerequisite**
**Type**
Prerequisite

Take ALL: ELN-132 and LEO-211

Take ELN-132(S14036) LEO-211(S12064);

### Student Learning Outcomes

**Objectives**
Plan a photonics project

**Objectives**
Manage and work a photonics project

**Objectives**
Build and test a photonics project

**Objectives**
Document a photonics project with a written final project report

## LET110 - Basic Law Enforcement Training (BLET)

### Overview

**Course Description**
This course covers the basic knowledge and skills needed for entry-level employment as a law enforcement officer in North Carolina as required by the Criminal Justice Education and Training Standards Commission and the Sheriffs' Education and Training Standards Commission. Topics include Commission-mandated content specific to law enforcement in North Carolina, criminal investigations, traffic enforcement/investigations, patrol techniques, crisis intervention, communication and de-escalation skills, interviews and interrogations, criminal and constitutional law, court procedures, civil process, ethical problem solving, and officer wellness. Upon completion, students should be able to demonstrate competence in the content required for the state comprehensive certification examination administered by the NC Department of Justice.

### Credit Hours

37

**Course Typically Offered**
Summer

## LEX110 - Introduction to Paralegal Study

### Overview

**Course Description**
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.

### Credit Hours

2

**Course Typically Offered**
Fall, Spring

### Student Learning Outcomes

**Objectives**
Define paralegal and explain what a paralegal does

**Objectives**
Discuss the history and growth of the profession

**Objectives**
Identify career opportunities for a paralegal

**Objectives**
Identifyskills and characteristics that will make a successful paralegal

**Objectives**
Discuss the advantages and disadvantages of regulation and types of regulation of the profession

**Objectives**
Define and identify major legal groups

**Objectives**
Discuss the American Legal System.

**Objectives**
Identify current green building standards such as LEED and Living Building Challenge and discuss the pros and cons of each.

## LEX120 - Legal Research/Writing I

### Overview

**Course Description**
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.

### Credit Hours

3

**Course Typically Offered**
Fall

### Student Learning Outcomes

**Objectives**
Find legal resources, including statutes and cases

**Objectives**
Cite legal resources

**Objectives**
Categorize legal resources as primary, secondary, mandatory, or persuasive

**Objectives**
Brief cases

**Objectives**
Research, draft and prepare internal law office memorandum

**Objectives**
Develop a systematic means of researching a legal problem/issue

**Objectives**
Communicate legal research results

**Objectives**
Demonstrate use of the National Reporter System; state regional and national digests; state and federal statutes; form books; dictionaries and hornbooks; WESTLAW; and other resources

**Objectives**
Demonstrate the descriptive word and known authority approach to legal research.

## LEX121 - Legal Research/Writing II

### Overview

**Course Description**
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.

### Credit Hours

3

**Course Typically Offered**
Spring

### Requisites

**Simple Requisites**

**State prerequisite**
**Type**
Prerequisite

Take LEX-120

Take LEX-120;

## Student Learning Outcomes

**Objectives**
Find legal resources, including statutes and cases using electronic methods and keycite

**Objectives**
Cite legal resources

**Objectives**
Brief cases

**Objectives**
Research, draft and prepare intenral law office memorandum for advanced legal issues

**Objectives**
Develop a systematic means of researching a legal problem/issue

**Objectives**
Communicate legal research results

**Objectives**
Demonstrate use of the National Reporter System; state regional, and national digests; state and federal statutes; form books; dictionaries and hornbooks; WESTLAW; encyclopedias; and their resources

**Objectives**
Utilize the descriptive word and known authority approach to legal research

**Objectives**
Prepare a bibliograpjhy for a legal topic

**Objectives**
Locate a law review article on point

**Objectives**
Locate an encyclopedia article on point

**Objectives**
Proof all work

# LEX130 - Civil Injuries

## Overview

**Course Description**
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.

## Credit Hours

3

**Course Typically Offered**
Fall, Spring

## Student Learning Outcomes

**Objectives**
Define a tort and distinguish between a tort and a crime, as well as between a tort and a contract.

**Objectives**
Trace the evolution of Tort Law.

**Objectives**
Recognize the philosophical principles and arguments pertaining to Tort Law.

**Objectives**
Define the terminology associated with: Initiation of a complaint and response to that complaint, conducting the discovery process, Trial preparation, conducting a trial, and the implementation of post-trial procedures. Read, brief, and analyze cases using the IRAC method.

**Objectives**
Prepare for an interview.

**Objectives**
Gather background information about the client and pertinent information about the client's situation.

**Objectives**
Interview and work with a police officer, and interview a lay witness.

**Objectives**
Recognize the elements of negligence: duty, breach, causation and damages.

**Objectives**
Recognize the concepts of negligence per se, res ipsa loquitur and objective versus subjective standards.

**Objectives**
Classify damages.

**Objectives**
Appreciate the mechanics of proving a case in terms of burden of proof and the functions of the judge and jury.

**Objectives**
The standard of care expected of a possessor of land.

**Objectives**
The standard of care that arises out of certain special relationships and special situations.

**Objectives**
The standard of care expected of landlords, tenants and sellers of land.

**Objectives**
The concepts of vicarious liability and the family purpose doctrine.

**Objectives**
Identify the criteria used to assess the reasonableness of a person's conduct.

**Objectives**
Distinguish between objective and subjective standards.

**Objectives**
Apply the concepts of negligence: per se and res ipsa loquitur.

**Objectives**
Distinguish between actual cause and proximate cause.

**Objectives**
Prove the element of actual cause.

**Objectives**
Categorize damages and recognize the various components thereof.

**Objectives**
Appreciate the practical problems inherent in calculating damages, and recognize the limitations on what a person can recover, and the controversy surrounding punitive damages.

**Objectives**
Distinguish between wrongful death and survival actions.

**Objectives**
Know the elements of contributory negligence, comparative negligence and assumption of risk and recognize exceptions to the contributory negligence rule.

**Objectives**
Problems that arise in the administration of a comparative negligence and assumption of risk.

**Objectives**
Situations in which immunity can be raised as a defense.

**Objectives**
The purpose behind the inherent problems in statute of limitations defenses.

**Objectives**
Distinguish between libel and slander, and identify the elements of defamation and the damages that can be recovered.

**Objectives**
Recognize the importance of distinguishing between private and public figures; Distinguish between absolute and qualified privileges of defendants. The standard of care pertaining to professionals; identify ways in which professional negligence is committed.

**Objectives**
Explain the informed consent doctrine; recognize defenses that can be raised in response to a professional negligence claim; appreciate the reasons for the increase in professional negligence claims.

**Objectives**
DEscribe circumstances in which animal owners are strictly liable for damages caused by their animals; Describe abnormally dangerous activities; Describe defenses that could be raised in response to a strict liability claim.

**Objectives**
Differentiate between negligence, warranty and strict liability causes of action.

**Objectives**
Appreciate the importance of classifying losses as personal injury, property damage or economic.

**Objectives**
Identify characteristics and examples of manufacturing defects, design defects and defective warnings.

**Objectives**
Recognize when it is appropriate to sue based on negligence, strict liability and breach of warranty.

**Objectives**
Identify the characteristics of express and implied warranties and explain the rationale behind strict liability.

**Objectives**
Outline the elements of a strict liability claim.

**Objectives**
Identify the defenses that can be raised in negligence, strict liability, and warranty causes of action.

**Objectives**
Identify the elements of assault, battery, false imprisonment and infliction of emotional distress.

**Objectives**
Identify the elements of trespass to land, trespass to chattels and conversion.

**Objectives**
Recognize those circumstances in which it is appropriate to raise defenses of consent or necessity.

**Objectives**
Recognize when force can be used to defend self, others and property to regain possession of chattels or to re-enter land.

**Objectives**
Distinguish between/among intentional, negligent and innocent misrepresentation and identify the elements of each.

**Objectives**
Identify situations in which one is entitled to rely on the representations of another.

**Objectives**
Identify the ways in which a plaintiff's damages may be measured.

**Objectives**
Distinguish between public and private nuisance and identify the elements of both.

**Objectives**
Distinguish among torts that are considered an invasion of privacy and identify each.

**Objectives**
Recognize the torts involving interference with family relations.

**Objectives**
Distinguish among torts involving interference with business relations and identify the elements of each.

**Objectives**
Distinguish among torts involving misuse of the legal process and identify the elements of each.

**Objectives**
Identify the circumstances in which an employer is vicariously liable for the acts of an employee or independent contractor.

**Objectives**
Distinguish between employer-employee relationships and employer-independent contractor relationships.

**Objectives**
Identify the exceptions to the bailor non-liability rule as applied to the owners of automobiles.

**Objectives**
Recognize situations in which contributory negligence is imputed.

**Objectives**
Identify the circumstances in which parents are vicariously liable for the acts of their children.

**Objectives**
Identify those situations in which tortfeasors are jointly and severally liable for their acts.

**Objectives**
Apply the concepts of contribution, satisfaction and indemnification.

**Objectives**
Distinguish between releases and covenants not to sue.

**Objectives**
Recognize the problems associated with releases in light of contribution.

**Objectives**
The student will understand and be able to apply ethics as applied to the paralegal and Tort law."

# LEX140 - Civil Litigation I

## Overview

**Course Description**
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.

## Credit Hours

3

**Course Typically Offered**
Summer

## Student Learning Outcomes

**Objectives**
Demonstrate knowledge of the North Carolina Rules of Civil Procedure, Federal Rules of Civil Procedure and the Rules of Evidence

**Objectives**
To understand the responsibility and activities involved in trial preparation

**Objectives**
To understand the concepts of venue and jurisdiction, and apply that knowledge of cases and ascertain where litigation would be filed

**Objectives**
Calculate deadlines and statute of limitations

**Objectives**
Determine if a case should be filed in federal or state court

**Objectives**
Determine is a state case should be filed in district or superior court

**Objectives**
Demonstrate a knowledge of the court systems

**Objectives**
Demonstrate knowledge of the time limits and counting rules associated with civil litigation, including appellate proceedings

**Objectives**
Prepare a summons and cover sheet, and other AOC forms

**Objectives**
Obtain a default judgment and how to set aside a default judgment

**Objectives**
Demonstrate knowledge on how to serve a defendant and how to file a lawsuit

**Objectives**
Demonstrate knowledge of ADR, discuss advantages, types

**Objectives**
Discuss the ethical issues related to this area of practice and how to resolve any ethical issues or questions

# LEX141 - Civil Litigation II

## Overview

**Course Description**
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.

## Credit Hours

3

**Course Typically Offered**
Fall, Spring

## Requisites

**Simple Requisites**

**State prerequisite**
**Type**
Prerequisite

Take LEX-140

Take LEX-140(S16406);

## Student Learning Outcomes

**Objectives**
Plan an investigation for a case

**Objectives**
Prepare a civil case for trial

**Objectives**
Demonstrate knowledge of the North Carolina Rules of Civil Procedure

**Objectives**
Describe the responsibility and activities involved in trial preparation

**Objectives**
Draft pleadings, including complaints, answers, motions, and appellate documents

**Objectives**
Draft discovery documents, including interrogatories, deposition questions, requests for production, etc.

**Objectives**
Summarize and digest depositions

**Objectives**
Plan evidence presentations for trial, including the preparation of exhibits

**Objectives**
Organize litigation files and prepare a trial notebook

**Objectives**
Prepare clients for trials, discovery requests and depositions

**Objectives**
Demonstrate knowledge of the time limits and counting rules associated with civil litigation, including appellate proceedings

**Objectives**
Demonstrate knowledge of ADR, discuss advantages, types 14. To discuss the ethical issues related to this area of practice and how to resolve any ethical issues or questions

# LEX150 - Commercial Law I

## Overview

**Course Description**
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.

## Credit Hours

3

**Course Typically Offered**
Fall

## Student Learning Outcomes

**Objectives**
Explain the requirements of an enforceable contract

**Objectives**
Draft a simple contract

**Objectives**
Demonstrate a working knowledge as to what constitutes a breach of contract and defenses to breach of contract

**Objectives**
Identify all conduct, including performance, that constitutes duties under a contract

**Objectives**
Explain the differences that arise when a contract comes under the sales provisions of the UCC

**Objectives**
List the duties under the Bulk Sales Act

**Objectives**
Explain the types of warranties and how they are used

**Objectives**
Recognize the requirements of a negotiable instrument

**Objectives**
Identify the various types of business entities and the advantages and disadvantages of each

**Objectives**
Prepare the necessary documents to create and start the most common forms of business organizations

# LEX160 - Criminal Law & Procedure

## Overview

**Course Description**
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.

### Credit Hours
3

**Course Typically Offered**
Fall, Spring

### Student Learning Outcomes

**Objectives**
Apply and analyze complex elements of criminal laws

**Objectives**
Apply and analyze the complexities of criminal defenses

**Objectives**
Implement critical thinking skills; and

**Objectives**
Discuss various components of criminal procedure

## LEX180 - Case Analysis & Reasoning

### Overview

**Course Description**
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.

### Credit Hours
2

**Course Typically Offered**
Fall

### Requisites

**Simple Requisites**

**State concurrent or previous courses**
**Type**
Corequisite

Take LEX-120

Take LEX-120;

### Student Learning Outcomes

**Objectives**
Identify the parties and procedural history of a case.

**Objectives**
Identify essential facts, significant facts, and insignificant facts.

**Objectives**
Write issue statements.

**Objectives**
Identify issues in judicial opinions.

**Objectives**
Distinguish between holdings and dicta.

**Objectives**
Apply inductive and deductive reasoning.

**Objectives**
Brief cases.

**Objectives**
Identify the different types of rationale on which the courts rely in judicial opinions.

**Objectives**
Draft internal and external memorandums of law.

**Objectives**
Differentiate an appellate brief from a case brief.

**Objectives**
Analogize cases.

## LEX210 - Real Property I

### Overview

**Course Description**
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.

## Credit Hours
3

**Course Typically Offered**
Fall

## Student Learning Outcomes

**Objectives**
Define basic Real Estate concepts, terminology, ownership interests and rights in real property.

**Objectives**
Distinguish between real versus personal property

**Objectives**
Evaluate methods of Acquiring Title, Spousal interest: dower/courtesy.

**Objectives**
Dsitinguish between Public and private land control, Determining ownership.

**Objectives**
Define Title Holders: individuals, co-tenants, and business entities.

**Objectives**
Explore Tax consequences and straw parties.

**Objectives**
Draft Offer to purchase contracts, Specific/common contract clauses, i.e. parties description, price.

**Objectives**
Explain when to apply Signatures and notarization.

**Objectives**
Summarize Additional clauses; existing building, new construction, commercial real estate.

**Objectives**
CAlculate ractice problems-completing offer to purchase.

**Objectives**
Sumamrize ther real estate contracts, Option contracts, Installment land contracts, Sale/leaseback agreement, Right of First Refusal.

**Objectives**
Define urveys and Legal Description, Reference and beginning points, Curves, Monuments, Subdivision plans, Metes and bounds.

**Objectives**
Explre Deeds, Elements of a deed--premises, habendum, and conclusion, Warranty Deeds; Warranties, Seisin, Right to Convey, Encumbrance, Quite Possession, Special Warranty Deed, Quit Claim Deed, Special Deeds, Sheriff Deed, Correction Deed, Commissioner's Deed, Condominium Deed, Timber and Mineral Deed.

**Objectives**
Title Abstracting, Marketability, Chain of Title, Title search, Conveyances and encumbrances, Torrens.

**Objectives**
Write Title Opinions, Form, Exceptions--standard and specific.

**Objectives**
Write Title Insurance, Coverage, Exceptions, Owners and Lenders Coverage, Cost

# LEX211 - Real Property II

## Overview

**Course Description**
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.

## Credit Hours
3

**Course Typically Offered**
Spring

## Requisites
**Simple Requisites**

**State prerequisite**
**Type**
Prerequisite

Take LEX-210

Take LEX-210(S10636);

## Student Learning Outcomes

**Objectives**
Define the basic terms and definitions used in the legal environement

**Objectives**
Describe contractual relationships

**Objectives**
Explain property ownership and Interests

**Objectives**
Explain business organizations and real property ownership

**Objectives**
demonstrate transfer of title

**Objectives**
discuss legal descriptions and surveys

**Objectives**
demonstrate title searching procedures

**Objectives**
Discuss Mortgages and Deeds of Trust

**Objectives**
Perfom a chain of title and complete title examination

**Objectives**
identify and complete loan closing documents along with a HUD settlement statement

**Objectives**
Explain the responsibilities of an attorney and paralegal in real estate transactions

**Objectives**
Discuss the ethical considerations involved with real property

# LEX240 - Family Law

## Overview
**Course Description**
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.

## Credit Hours
3

**Course Typically Offered**
Fall, Spring

## Student Learning Outcomes

**Objectives**
Analyze and discuss breach of promise to marry, the heart balm statute, and contracts restraining marriage.

**Objectives**
Define and understand ante nuptial agreements and contract cohabitation

**Objectives**
Define and discuss ceremonial and common law marriages.

**Objectives**
Define and discuss annulment.

**Objectives**
Analyze separation agreements with regard to the legal issues and drafting options.

**Objectives**
Define and discuss child custody and child support.

**Objectives**
Define and analyze divorce, judicial separation, separate maintenance.

**Objectives**
Explain divorce procedure.

**Objectives**
Define and identify tax consequences of separation and divorce.

**Objectives**
Discuss legal rights and status of women.

**Objectives**
Explain illegitimacy and paternity proceedings.

**Objectives**
Define and discuss surrogacy.

**Objectives**
Identify and discuss torts involving family members.

**Objectives**
Describe ethics as they apply to family law.

**Objectives**
Prepare drafts of divorce pleadings, separation agreements, and child support worksheets for attorney review.

# LEX250 - Wills, Estates, & Trusts

## Overview

**Course Description**
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.

## Credit Hours

3

**Course Typically Offered**
Fall

## Student Learning Outcomes

**Objectives**
Draft simple wills

**Objectives**
Prepare estate forms

**Objectives**
Explain administration of estates, including taxation and terms regarding trusts.

# LEX270 - Law Office Management/Technology

## Overview

**Course Description**
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.

## Credit Hours

2

**Course Typically Offered**
Spring

## Student Learning Outcomes

**Objectives**
Establish and maintain various law office systems, monitor case progress, and supervise non-lawyer personnel.

# LEX271 - Law Office Writing

## Overview

**Course Description**
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.

## Credit Hours

2

**Course Typically Offered**
Summer

## Student Learning Outcomes

**Objectives**
Spell and define many legal terms

**Objectives**
Draft a status letter

**Objectives**
Draft an opinion letter

**Objectives**
Draft common correspondence

**Objectives**
Draft a demand letter

**Objectives**
Prepare a settlement brochure

**Objectives**
Demonstrate a professional writing style, using correct grammar and sentence formation

**Objectives**
Proof and improve documents

**Objectives**
Prepare a professional resume

**Objectives**
Prepare a simple case brief

**Objectives**
Prepare simple case citations

**Objectives**
Prepare marketing materials for a law office

**Objectives**
Discuss the ethical issues related to legal correspondence and how to resolve any ethical issues or questions

# LEX280 - Ethics & Professionalism

## Overview

**Course Description**
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.

## Credit Hours

2

**Course Typically Offered**
Fall, Spring

## Student Learning Outcomes

**Objectives**
Discuss and identify the role of a paralegal within a law firm and the ethical duty a paralegal owes to the attorney.

**Objectives**
Discuss and identify the fiduciary responsibility that the attorney owes the client.

**Objectives**
Explain common practices aimed at satisfying fiduciary duties.

# LIB110 - Introduction to Libraries

## Overview

**Course Description**
This course includes the history and future of libraries, a survey of library types, and an overview of library organization, services, and community relationships. Emphasis is placed on societal roles of the library, literary and intellectual freedom, comparisons and contrasts of library types, and the roles of professional organizations. Upon completion, students should be able to discuss literacy and intellectual freedom, describe library organization and compare types of libraries, their materials, and services.

## Credit Hours

3

**Course Typically Offered**
Fall

## Student Learning Outcomes

**Objectives**
Discuss library professional organizations

**Objectives**
Discuss and compare the characteristics of different types of libraries, their materials, and services

**Objectives**
Discuss library services and their relationship with a library's community

**Objectives**
Discuss the societal role of libraries

**Objectives**
Discuss issues facing libraries

**Objectives**
Discuss the history of libraries and their anticipated futures

# LIB111 - Library Info Resources and Services

## Overview

**Course Description**
This course provides introductory skills for selecting and using general and specialized information resources in print and electronic formats and related copyright issues. Emphasis is placed on selection tools, print and electronic censorship, core collection materials in various disciplines, compiling bibliographies and interpreting and referring reference questions. Upon completion, students should be able to use numerous resources to answer directional and factual questions and to decide when to refer difficult reference questions.

## Credit Hours

3

**Course Typically Offered**
Fall

## Student Learning Outcomes

**Objectives**
Discuss and use numerous print and electronic reference resource

**Objectives**
Answer directional and factual questions

**Objectives**
Discuss library copyright issues

**Objectives**
Discuss library censorship issues

**Objectives**
Discuss core collection materials

**Objectives**
Discuss and use bibliographies

**Objectives**
Interpret and refer reference questions

# LIB112 - Library Collection Develop/ Acquisitions

## Overview

**Course Description**
This course covers library collection development and acquisitions policies and procedures. Emphasis is placed on evaluating mission statements, needs assessment studies, purchasing materials using selection criteria and tools, and related collection development and acquisitions activities. Upon completion, students should be able to evaluate mission statements, conduct needs assessments using selected criteria, and complete related collection development and acquisitions activities.

## Credit Hours

3

**Course Typically Offered**
Spring

## Student Learning Outcomes

**Objectives**
Understand basic acquisitions procedures,

**Objectives**
Understand material selection tools and policies,

**Objectives**
Understand the importance of material management, including conservation, binders, and the acceptance of gifts,

**Objectives**
Understand weeding policies and their implementation.

**Objectives**
Understand basic budget accountability,

**Objectives**
Understand how to prepare material orders,

**Objectives**
Understand how to maintain order files,

**Objectives**
Understand how to track periodical materials and how to prepare and present claim forms,

**Objectives**
Understand how to perform basic accounting tasks, and

**Objectives**
Understand how to follow inventory procedures.

# LIB113 - Library Cataloging & Classifying

## Overview

**Course Description**
This course covers standards and procedures for copy cataloging and types of classification systems. Emphasis is placed on selecting bibliographic records, maintaining and using authority records and the importance of the catalog to the library mission. Upon completion, students should be able to select the appropriate MARC record, search OCLC, and demonstrate an understanding of authority files.

## Credit Hours

3

**Course Typically Offered**
Fall

## Student Learning Outcomes

**Objectives**
Understand the importance and global impact of knowing accurate cataloging skills

**Objectives**
Understand the importance of the library mission

**Objectives**
Understand and assign library classification schemes

**Objectives**
Select appropriate bibliographic records

**Objectives**
Understand standards and procedures for copy cataloging

**Objectives**
Understand of basic descriptive cataloging rules; i.e. RDA

**Objectives**
Provide correct information for MARC

**Objectives**
Understand the purpose of authority files

**Objectives**
Perform basic original cataloging

## LIB114 - Library Public Service Operations

### Overview

**Course Description**
This course covers effective library orientations, effective patron service, automated circulation systems, statistics and reports, reserves, and security. Emphasis is placed on public relations, problem solving, communication skills, circulation systems and policies, interlibrary loan procedures, shelving and display options. Upon completion, students should be able to deal with diverse patrons, conduct library orientations, compile reports from statistical data, initiate interlibrary loans, and prepare displays.

### Credit Hours

3

**Course Typically Offered**
Spring

### Student Learning Outcomes

**Objectives**
Deal with diverse patrons

**Objectives**
Conduct library orientations

**Objectives**
Compile reports from statistical data

**Objectives**
Initiate interlibrary loans

## LIB210 - Electronic Library Databases

### Overview

**Course Description**
This course covers developing search strategies for using electronic resources in the humanities, social and behavioral sciences, physical and life sciences, and health-related fields. Emphasis is placed on the reference interview, teaching Boolean logic and other search strategies, retrieving and evaluating information, and citing it in APA/MLA style. Upon completion, students should be able to describe methods of information retrieval, use search strategies to teach basic research using databases, and cite resources appropriately.

### Credit Hours

3

**Course Typically Offered**
Spring

### Requisites

**Simple Requisites**

**State prerequisite**
**Type**
Prerequisite

Take All: LIB-111 and WEB-110

Take LIB-111(S20692) WEB-110(S21129);

### Student Learning Outcomes

**Objectives**
Use Boolean logic and other search strategies,

**Objectives**
Evaluate library databases

**Objectives**
Perform advanced database searches

**Objectives**
Interview a library patron so that they can conduct a database search for the patron

## LIB211 - Library Program Development

### Overview

**Course Description**
This course covers the purpose of library programs and various methods used for program design, promotion, delivery, and evaluation. Topics include serving library communities through appropriate program activities such as storytelling, puppet shows, book clubs, lectures, reading aloud, workshops, special collections, and outreach. Upon completion, students should be able to prepare, promote, deliver, and evaluate appropriate library programs.

### Credit Hours

3

**Course Typically Offered**
Fall

### Student Learning Outcomes

**Objectives**
Assess library program needs

**Objectives**
Plan, implement, and evaluate library programs

**Objectives**
Promote special collections

**Objectives**
Demonstrate an understanding of the relationship between the library audience and its programs

**Objectives**
Understand the needs of special populations and how library personnel address the needs

**Objectives**
Interpret and refer reference questions

## LIB212 - Library Services/Special Needs

### Overview

**Course Description**
This course covers basic information for serving library users with special needs. Emphasis is placed on ADA guidelines, the location and use of appropriate resources, and accessibility options. Upon completion, students should be able to access appropriate information about ADA guidelines, locate and use appropriate resources, and be award of accessibility options.

### Credit Hours

3

**Course Typically Offered**
Fall

### Student Learning Outcomes

**Objectives**
Describe the special and specific needs of library patrons

**Objectives**
Describe and be able to explain the use of special and specific aids and devices available to and for special needs library patrons

**Objectives**
Effectively communicate with library patrons with special needs.

## LIB213 - Cataloging Nonprint Materials

### Overview

**Course Description**
This course continues the study and application of information cataloging practices. Emphasis is placed on cataloging information resources, updating bibliographic materials in databases, an overview of Dublin Core, and nonprint materials cataloging practices. Upon completion, students should be able to catalog nonprint and electronic resources.

### Credit Hours

3

**Course Typically Offered**
Fall, Spring

### Requisites

**Simple Requisites**

**State prerequisite**
**Type**
Prerequisite

Take LIB-113

Take LIB-113(S20251);

### Student Learning Outcomes

**Objectives**
Explore various types of non-print materials,

**Objectives**
Explore current MARC standards for non-print materials, and

**Objectives**
Prepare basic cataloging for non-print materials.

## LIB214 - Library Services/Children

### Overview

**Course Description**
This course covers the location, evaluation, acquisition, and presentation of children's materials in libraries. Emphasis is placed on locating, evaluating, acquiring, and presenting children's literature, video and audio materials, and web

sites through programs, displays, talks, and instruction. Upon completion, students should be able to locate, evaluate, acquire, and present a wide range of children's materials to library users.

### Credit Hours
3

**Course Typically Offered**
Fall

### Student Learning Outcomes

**Objectives**
Locate age-appropriate children's materials,

**Objectives**
Evaluate a wide range of age-appropriate children's materials for library users,

**Objectives**
Acquire a wide range of age-appropriate children's materials for library users,

**Objectives**
Present a wide range of age-appropriate children's materials to library users, and

**Objectives**
Discuss children today (how they live, challenges they face, how they spend their time, etc.).

## LIB215 - Library Management

### Overview

**Course Description**
This course covers basic management duties specific to the field of Library and Information Science. Topics include supervisory skills, delegation, time management, conflict resolution, training and coaching others, communication techniques, organizational theory, leadership and decision making in the library setting. Upon completion, students should be able to demonstrate knowledge of successful library operations, including key management concepts and strategies.

### Credit Hours
3

**Course Typically Offered**
Spring

### Student Learning Outcomes

**Objectives**
Discuss history and development of management theory

**Objectives**
Discuss library strategic planning and decision making

**Objectives**
Discuss human resource and staffing issues in libraries

**Objectives**
Discuss the effects of effective communication, management, and leadership on an organization

**Objectives**
Discuss current issues facing library managers in the 21st century and propose solutions

## LSG121 - Fall Gardening Lab

### Overview

**Course Description**
This course provides basic hands-on experience in fall gardening techniques. Emphasis is placed on pruning, irrigation, planting, fertilizing, pest control, equipment operation, and turf maintenance. Upon completion, students should be able to perform various techniques essential to maintaining the fall landscape.

### Credit Hours
2

## MAC111 - Machining Technology I

### Overview

**Course Description**
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.

### Credit Hours
6

**Course Typically Offered**
Fall

### Student Learning Outcomes

**Objectives**
Safely operate all machines in shop

**Objectives**
Read measuring tools

**Objectives**
Read simple blueprints

**Objectives**
Layout/build simple projects in metal

**Objectives**
Identify/use hand tools

**Objectives**
Perfprm simple machining calculations

## MAC112 - Machining Technology II

### Overview

**Course Description**
This course provides additional instruction and practice in the use of precision measuring tools, lathes, milling machines, and grinders. Emphasis is placed on setup and operation of machine tools including the selection and use of work holding devices, speeds, feeds, cutting tools, and coolants. Upon completion, students should be able to perform basic procedures on precision grinders and advanced operations of measuring, layout, drilling, sawing, turning, and milling.

### Credit Hours

6

**Course Typically Offered**
Spring

### Student Learning Outcomes

**Objectives**
Perform complex operations on lathe

**Objectives**
Perform complex operations on mill

**Objectives**
Explain complex machining calculations

**Objectives**
Layout/build complex projects in metal

**Objectives**
Read digital readouts correctly

**Objectives**
Set up and use horizontal mills

**Objectives**
Perform basic procedures on grinders

## MAC113 - Machining Technology III

### Overview

**Course Description**
This course provides an introduction to advanced and special machining operations. Emphasis is placed on working to specified tolerances with special and advanced setups. Upon completion, students should be able to produce a part to specifications.

### Credit Hours

6

**Course Typically Offered**
Summer

### Student Learning Outcomes

**Objectives**
Surface grind parts to tolerance to within .0001 and square.

**Objectives**
Cylindrical grind shafts straight and with angles.

**Objectives**
Machine internal and external threads.

**Objectives**
Machine and grind Vs on center.

**Objectives**
Operate a Plunge EDM.

**Objectives**
Sharpen end mills - straight shank and arbor cutters.

**Objectives**
Heat-treat and temper parts.

# MAC122 - CNC Turning

## Overview

**Course Description**
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.

## Credit Hours

2

**Course Typically Offered**
Fall

## Student Learning Outcomes

**Objectives**
Identify “terms” related to CNC Turning: turning, boring, facing, grooving, chasing"threads", undercut, chamfer, radius, angle, knurling

**Objectives**
Program, Edit, Setup and Manufacture parts using a variety of models of production size CNC Turning Centers.

# MAC124 - CNC Milling

## Overview

**Course Description**
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.

## Credit Hours

2

**Course Typically Offered**
Spring

## Student Learning Outcomes

**Objectives**
Use programming codes pertaining to the Hass and the Bridgeport CNC Mills

**Objectives**
Setup, operate and manufacture various parts on both machines

**Objectives**
Inspect all parts using various measuring devices

**Objectives**
Edit programs

**Objectives**
Define Terms pertaining to CNC Milling

# MAC152 - Advanced Machining Calculations

## Overview

**Course Description**
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.

## Credit Hours

2

**Course Typically Offered**
Spring

## Student Learning Outcomes

**Objectives**
Calculate solutions to machining problems

# MAC153 - Compound Angles

## Overview

**Course Description**
This course introduces the application of basic types and uses of compound angles. Emphasis is placed on problem solving by tilting and rotating adjacent angles to resolve an unknown compound angle. Upon completion, students should be able to set up and develop compound angles on parts using problem-solving techniques.

### Credit Hours
2

**Course Typically Offered**
Fall

### Student Learning Outcomes

**Objectives**
Set up and develop compound angles on parts using problem-solving techniques

## MAC171 - Measure/Material and Safety

### Overview

**Course Description**
This course introduces precision measuring instruments, process control and adjustment, inspection, material handling and workplace safety. Topics include properly identifying and handling various measurement instruments and materials, process control, adjustment and improvement, personal protective equipment (PPE) and OSHA safety regulations. Upon completion, students should be able to safely demonstrate effective measurement techniques, identify and handle various materials, and explain safe industry practices.

### Credit Hours
1

**Course Typically Offered**
Fall

### Student Learning Outcomes

**Objectives**
Safely demonstrate effective measurement techniques.

**Objectives**
Identify and handle various materials.

**Objectives**
Explain safe industry practices.

## MAC224 - Advanced CNC Milling

### Overview

**Course Description**
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.

### Credit Hours
2

**Course Typically Offered**
Spring

### Requisites

**Simple Requisites**

**Local Prerequisite**
**Type**
Prerequisite

None Take MAC-124;

Take MAC-124;

### Student Learning Outcomes

**Objectives**
Program CNC Machining Centers

**Objectives**
Setup CNC Machining Centers

**Objectives**
Operate CNC Machining Centers

**Objectives**
Use 4th axis machining capabilities appropriately

**Objectives**
Complete a Thread Mill

**Objectives**
Setup and use Multi-Fixtures

## MAC226 - CNC EDM Machining

### Overview

**Course Description**
This course introduces the programming, setup, and operation of CNC electrical discharge machines. Topics include programming formats, control functions, program editing, production of parts, and inspection. Upon completion, students should be able to manufacture simple parts using CNC electrical discharge machines.

### Credit Hours
2

**Course Typically Offered**
Spring

### Student Learning Outcomes

**Objectives**
Apply conventional and computer aided principles of programming

**Objectives**
Compute wire compensation and offsets

**Objectives**
Edit programming and setup

**Objectives**
Define terms relating to Wire Machining

**Objectives**
Relate Wire Machining to Die Making

## MAC241 - Jigs & Fixtures I

### Overview

**Course Description**
This course introduces the application and use of jigs and fixtures. Emphasis is placed on design and manufacture of simple jigs and fixtures. Upon completion, students should be able to design and build simple jigs and fixtures.

### Credit Hours

4

**Course Typically Offered**
Fall

### Student Learning Outcomes

**Objectives**
Explain basic tool building

**Objectives**
Fabricate jigs and fixtures

**Objectives**
Develop self-confidence in tool building

**Objectives**
Explain the importance of accuracy

**Objectives**
Apply support, clamping, and locating principles

**Objectives**
Develop the design for jigs and fixtures

**Objectives**
Make a tool drawing

**Objectives**
Heat treatment of tool parts

**Objectives**
Select standard components from catalogs

## MAC243 - Die Making I

### Overview

**Course Description**
This course introduces the principles and applications of die making. Topics include types, construction, and application of dies. Upon completion, students should be able to design and build simple dies.

### Credit Hours

4

**Course Typically Offered**
Spring

### Student Learning Outcomes

**Objectives**
Identify types of dies and their parts

**Objectives**
Calculate cutting clearance

**Objectives**
Calculate stripping force

**Objectives**
Build and assemble a simple washer die

**Objectives**
Design a simple stock strip

**Objectives**
Explain dies are constructed and operate

## MAC244 - Die Making II

### Overview

**Course Description**
This course provides continued study in the application and use of dies. Emphasis is placed on the design and manufacturing of complex dies. Upon completion, students should be able to design and build complex dies.

### Credit Hours

4

**Course Typically Offered**
Summer

### Requisites

**Simple Requisites**

**Local Prerequisite**
**Type**
Prerequisite

None Take MAC-243(S22998);

Take MAC-243(S22998);

### Student Learning Outcomes

**Objectives**
Calculate bend allowance curves

**Objectives**
Design and lay out a progressive die

**Objectives**
Build a three to four station die that produces a part

**Objectives**
Understand blank development

**Objectives**
Understand die stops and progression

**Objectives**
Understand stripping requirements of a die

## MAC245 - Mold Construction I

### Overview

**Course Description**
This course introduces the principles of mold making. Topics include types, construction, and application of molds. Upon completion, students should be able to design and build simple molds.

### Credit Hours

4

**Course Typically Offered**
Fall

### Student Learning Outcomes

**Objectives**
Identify different groups of plastics

**Objectives**
Identify different plastics in each group

**Objectives**
Identify different ways of molding

**Objectives**
Identify different mold components

**Objectives**
Assemble and disassemble mold bases

**Objectives**
Define Terms pertaining to Mold Making

**Objectives**
Machine various Cavities, Cores and other components to print

# MAC246 - Mold Construction II

## Overview

**Course Description**
This course provides continued study in the application and use of molds. Emphasis is placed on design and manufacturing of complex molds. Upon completion, students should be able to design and build complex molds.

## Credit Hours

4

**Course Typically Offered**
Spring

## Requisites

**Simple Requisites**

**Prerequisite**
**Type**
Prerequisite

None Take MAC-245(S23004);

Take MAC-245(S23004);

## Student Learning Outcomes

**Objectives**
Design Mold Construction

**Objectives**
Design and Build Molds from Parts and Part Prints

**Objectives**
Distiguish between the different types of plastics.

**Objectives**
Install Various Gates and Vents

**Objectives**
Summarize how to Accomplish a Good Finish

# MAS110 - Masonry I

## Overview

**Course Description**
This course introduces the basic principles of construction with masonry units. Topics include history of the masonry field, safety practices, blueprint reading, and principles of laying masonry units to the line using tools, equipment, and materials. Upon completion, students should be able to demonstrate knowledge of safety practices, blueprint reading, and basic tool use; identify materials; operate machinery; and lay masonry units.

## Credit Hours

10

**Course Typically Offered**
Fall

# MAS120 - Masonry II

## Overview

**Course Description**
This course provides practical experience in cost estimating, foundations, bonding variations, expansion joints, wall ties, building codes, and other related topics. Emphasis is placed on material estimation, layout of footing, construction of walls, reinforcements, scaffolding, insulating, and building codes. Upon completion, students should be able to determine cost, plan sound building procedures, construct masonry projects, and apply building codes.

## Credit Hours

10

**Course Typically Offered**
Spring

# MAS130 - Masonry III

## Overview

**Course Description**
This course provides fundamentals and skills used in masonry construction. Emphasis is placed on building chimneys, fireplaces, columns, concrete masonry, and arches; using materials economically; satisfying needs and expectations; and proper work ethics. Upon completion, students should be able to build structures covered in the course, demonstrate increased speed and accuracy, and make smooth transitions between construction stages.

## Credit Hours

8

**Course Typically Offered**
Spring

# MAS140 - Introduction to Masonry

## Overview

**Course Description**
This course introduces basic principles and practices of masonry. Topics include standard tools, materials, and practices used in basic masonry and other related topics. Upon completion, students should be able to demonstrate an understanding of masonry and be able to use basic masonry techniques.

## Credit Hours

2

**Course Typically Offered**
Fall, Spring

### Student Learning Outcomes

**Objectives**
Demonstrate safe and effective use of selected tools utilized in the masonry trade.

**Objectives**
Demonstrate how to correctly mix mortar using both hand tools and power mixer.

**Objectives**
Develop fluency with proper techniques for laying brick and block to a line

**Objectives**
Develop fluency building brick and block corners

## MAT045 - Math Skills Support

### Overview

**Course Description**
This course provides opportunities for students to build a stronger foundation for success in their gateway 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 gateway math course. Upon completion, student should be able to apply mathematical concepts and critical thinking skills to solve problems relevant to the student's gateway math course.

### Credit Hours

2

## MAT045A - Math Skills Support for Mat-121

### Overview

**Course Description**
This course provides opportunities for students to build a stronger foundation for success in their gateway 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 gateway math course. Upon completion, student should be able to apply mathematical concepts and critical thinking skills to solve problems relevant to the student's gateway math course.

### Credit Hours

2

**Course Typically Offered**
Fall, Spring

## MAT045P - Math Skills Support for Mat-171

### Overview

**Course Description**
This course provides opportunities for students to build a stronger foundation for success in their gateway 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 gateway math course. Upon completion, student should be able to apply mathematical concepts and critical thinking skills to solve problems relevant to the student's gateway math course.

### Credit Hours

2

**Course Typically Offered**
Fall, Spring, Summer

## MAT045Q - Math Skills Support for Mat-143

### Overview

**Course Description**
This course provides opportunities for students to build a stronger foundation for success in their gateway 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 gateway math course. Upon completion, student should be able to apply mathematical concepts and critical thinking skills to solve problems relevant to the student's gateway math course.

### Credit Hours

2

**Course Typically Offered**
Fall, Spring, Summer

## MAT045S - Math Skills Support for Mat-152

### Overview

**Course Description**
This course provides opportunities for students to build a stronger foundation for success in their gateway 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 gateway math course. Upon completion, student should be able to apply mathematical concepts and critical thinking skills to solve problems relevant to the student's gateway math course.

### Credit Hours

2

**Course Typically Offered**
Fall, Spring, Summer

## MAT110 - Mathematical Measurement and Literacy

### Overview

**Course Description**
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.

### Credit Hours
3

## MAT121 - Algebra/Trigonometry I

### Overview
**Course Description**
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.

### Credit Hours
3

### Requisites
**Simple Requisites**

**Local Prerequisite**
**Type**
Corequisite

Take MAT-045A;

Take 1 group; # Take DMA-010 DMA-020 DMA-030 DMA-040(S24983) DMA-050(S24984) DMA-060(S24985); # Take DMA-010 DMA-020 DMA-030 DMA-045 DMA-060(S24985); # Take DMA-025 DMA-040(S24983) DMA-050(S24984) DMA-060(S24985); # Take DMA-025 DMA-045 DMA-060(S24985); # Take 1 courses; From rule RMINP3; # Take BSP-4003; From rule BSPMINP3; # Take MAT-071(S25141); # Take MAT-021; # Take MAT-060 MAT-070; # Take MAT-095; # Take MAT-120(S20803); # Take MAT-161(S20916); # Take MAT-171(S20807); # Take MAT-175(S11270); # Take MAT-045A;

## MAT122 - Algebra/Trigonometry II

### Overview
**Course Description**
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.

### Credit Hours
3

**Course Typically Offered**
Spring, Summer

### Requisites
**Simple Requisites**

**State prerequisite**
**Type**
Prerequisite

Take MAT-121

Take MAT-121(S23927);

### Student Learning Outcomes

**Objectives**
Solve relevant contextual problems involving exponential and logarithmic functions

**Objectives**
Interpret and create transformations of functions.

**Objectives**
Utilize the Law of Sines and Law of Cosines to solve oblique triangles and their applications.

**Objectives**
Define vectors and compute vector operations.

**Objectives**
Apply vector concepts to solve applications.

**Objectives**
Employ basic statistical concepts to summarize and present data and draw conclusions.

## MAT143 - Quantitative Literacy

### Overview

**Course Description**
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.

### Credit Hours
3

### Requisites
**Simple Requisites**

**Local Prerequisite**
**Type**
Corequisite

Take MAT-045Q;

Take 1 group; # Take DMA-010 DMA-020 DMA-030 DMA-040(S24983) DMA-050(S24984); # Take DMA-010 DMA-020 DMA-030 DMA-045; # Take DMA-025 DMA-040(S24983) DMA-050(S24984); # Take DMA-025 DMA-045; # Take MAT-003; From rule RMINP2; # Take BSP-4003; From rule BSPMINP2; # Take MAT-043; # Take MAT-052; # Take MAT-070 MAT-060; # Take MAT-080 MAT-060; # Take MAT-090 MAT-060; # Take MAT-095; # Take MAT-120(S20803); # Take MAT-121(S20804); # Take MAT-161(S20916); # Take MAT-171(S20807); # Take MAT-175(S11270); # Take DMA-010 DMA-020 DMA-030 DMA-040(S23170); # Take MAT-045Q;

## MAT152 - Statistical Methods I

### Overview
**Course Description**
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.

### Credit Hours
4

### Requisites
**Simple Requisites**

**Local Prerequiste**
**Type**
Corequisite

Take MAT-045S;

Take 1 group; # Take DMA-010 DMA-020 DMA-030 DMA-040(S24983) DMA-050(S24984); # Take DMA-010 DMA-020 DMA-030 DMA-045; # Take DMA-025 DMA-040(S24983) DMA-050(S24984); # Take DMA-025 DMA-045; # Take MAT-003; From rule RMINP2; # Take BSP-4003; From rule BSPMINP2; # Take MAT-043; # Take MAT-052; # Take MAT-060 MAT-070; # Take MAT-080 MAT-060; # Take MAT-090 MAT-060; # Take MAT-095; # Take MAT-120(S20803); # Take MAT-121(S20804); # Take MAT-161(S20916); # Take MAT-171(S20807); # Take MAT-175(S11270); # Take MAT-045S;

## MAT171 - Precalculus Algebra

### Overview
**Course Description**
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.

### Credit Hours
4

### Requisites
**Simple Requisites**

**Local Prerequisite**
**Type**
Corequisite

Take MAT-045P;

Take 1 group; # Take DMA-010 DMA-020 DMA-030 DMA-040(S24983) DMA-050(S24984) DMA-060(S24985) DMA-070(S24987) DMA-080(S24988); # Take DMA-010 DMA-020 DMA-030 DMA-040(S24983) DMA-050(S24984) DMA-065(S25064); # Take DMA-025 DMA-040(S24983) DMA-050(S24984) DMA-060(S24985) DMA-070(S24987) DMA-080(S24988); # Take DMA-025 DMA-040(S24983) DMA-050(S24984) DMA-065(S25064); # Take DMA-025 DMA-045 DMA-060(S24985) DMA-070(S24987) DMA-080(S24988); # Take DMA-025 DMA-045 DMA-065(S25064); # Take 1 courses; From rule RMINP3; # Take BSP-4003; From rule BSPMINP3; # Take MAT-021; # Take MAT-071(S25141); # Take MAT-060 MAT-070 MAT-080; # Take MAT-095; # Take MAT-120(S20803); # Take MAT-121(S20804); # Take MAT-161(S20916); # Take MAT-175(S11270); # Take MAT-045P;

## MAT172 - Precalculus Trigonometry

### Overview
**Course Description**
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.

### Credit Hours
4

**Course Typically Offered**
Fall, Spring, Summer

## Requisites

**Simple Requisites**

**State prerequisite**
**Type**
Prerequisite

Take MAT-171

Take MAT-171(S25432);

## Student Learning Outcomes

**Objectives**
Use the unit circle and right triangle definitions to evaluate and graph trigonometric functions and their inverses, to derive trigonometric identities, and to simplify trigonometric expressions.

**Objectives**
Use multiple methods to solve problems involving trigonometric equations, right triangles, and oblique triangles.

**Objectives**
Demonstrate knowledge of vector definitions and perform vector operations.

**Objectives**
Convert equations and graphs between rectangular and polar coordinate systems, and apply to complex numbers.

**Objectives**
Use multiple representations to define, construct and analyze conic sections.

**Objectives**
Create, graph, and analyze parametric equations.

# MAT263 - Brief Calculus

## Overview

**Course Description**
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. This course has been approved for transfer under the CAA as a general education course in Mathematics. This course has been approved for transfer under the ICAA as a general education course in Mathematics.

## Credit Hours

4

**Course Typically Offered**
Fall, Spring

## Requisites

**Simple Requisites**

**State prerequisite**
**Type**
Prerequisite

Take One: MAT-171 or MAT-175

Take MAT-171(S25432) or MAT-175(S26068);

## Student Learning Outcomes

**Objectives**
Calculate limits and verify using graphical, numerical and analytical methods.

**Objectives**
Interpret the derivative as a rate of change.

**Objectives**
Analyze and interpret the derivative of algebraic, exponential, and logarithmic functions.

**Objectives**
Evaluate antiderivatives and definite integrals of algebraic, exponential, and logarithmic functions.

**Objectives**
Apply derivatives and integrals to business, economics, and biological and behavioral sciences contexts.

**Objectives**
Use appropriate technology and communicate results through a variety of media.

## MAT271 - Calculus I

### Overview

**Course Description**
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.

### Credit Hours

4

**Course Typically Offered**
Fall, Spring, Summer

### Requisites

**Simple Requisites**

**State prerequisite**
**Type**
Prerequisite

Take One: MAT-172 or MAT-175

Take MAT-172(S23935) or MAT-175(S26068);

### Student Learning Outcomes

**Objectives**
Apply the definition of limit to evaluate limits by multiple methods and use it to derive the definition and rules for differentiation and integration.

**Objectives**
Use derivatives to analyze and graph algebraic and transcendental functions.

**Objectives**
Select and apply appropriate models and differentiation techniques to solve problems involving algebraic and transcendental functions; these problems will include but are not limited to applications involving optimization and related rates.

**Objectives**
Apply the definition of indefinite integral to solve basic differential equations.

**Objectives**
Apply the definition of definite integral to evaluate basic integrals.

**Objectives**
Use the fundamental theorem of calculus to evaluate integrals involving algebraic and transcendental functions.

## MAT272 - Calculus II

### Overview

**Course Description**
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.

### Credit Hours

4

**Course Typically Offered**
Fall, Spring

### Requisites

**Simple Requisites**

**State prerequisite**
**Type**
Prerequisite

Take MAT-271

Take MAT-271(S23939);

### Student Learning Outcomes

**Objectives**
Select and apply appropriate models and integration techniques to solve problems involving algebraic and transcendental functions; these problems will include but are not limited to applications involving volume, arc length, surface area, centroids, force and work.

**Objectives**
Evaluate proper and improper integrals using various integration techniques.

**Objectives**
Analyze the convergence and divergence of infinite sequences and series and find the Taylor and McLaurin representations for transcendental functions.

**Objectives**
Use differentiation and integration to analyze the graphs of polar form equations and parametric form equations.

**Objectives**
Solve separable and first-order linear differential equations.

**Objectives**
Analyze and graph conic sections using calculus techniques.

# MAT273 - Calculus III

## Overview

**Course Description**
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.

## Credit Hours

4

**Course Typically Offered**
Fall, Spring

## Requisites

**Simple Requisites**

**State prerequisite**
**Type**
Prerequisite

Take MAT-272

Take MAT-272(S23940);

## Student Learning Outcomes

**Objectives**
Perform operations with vectors in two and three dimensional space and apply to analytic geometry.

**Objectives**
Differentiate and integrate vector-valued functions and apply calculus to motion problems in two and three dimensional space.

**Objectives**
Determine the limits, derivatives, gradients, and integrals of multivariate functions.

**Objectives**
Solve problems in multiple integration using rectangular, cylindrical, and spherical coordinate systems.

**Objectives**
Select and apply appropriate models and techniques to define and evaluate line and surface integrals; these techniques will include but are not limited to Green's, Divergence, and Stoke's theorems.

**Objectives**
Demonstrate proficiency in using CAS technology to analyze, solve and interpret the various applications.

# MAT280 - Linear Algebra

## Overview

**Course Description**
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.

## Credit Hours

3

**Course Typically Offered**
Fall, Spring

## Requisites

**Simple Requisites**

**State prerequisite**
**Type**
Prerequisite

Take MAT-271

Take MAT-271(S23939);

## Student Learning Outcomes

**Objectives**
Use analytical and graphical representations to apply vector operations in multiple-dimensions.

**Objectives**
Solve systems of linear equations using multiple manual and technology-based methods; these methods will include but are not limited to Gaussian and Gauss-Jordan.

**Objectives**
Use eigenvalues, eigenvectors and diagonalization to solve problems in appropriate situations.

**Objectives**
Use matrix operations and linear transformations to solve problems in appropriate situations.

**Objectives**
Demonstrate knowledge of orthogonal projections and orthogonal complements of subspaces, and apply to appropriate situations.

**Objectives**
Use the fundamental concept of a basis for a subspace to give a precise definition of dimensions and rank, and to solve problems in appropriate situations.

**Objectives**
Demonstrate proficiency in using CAS technology to analyze, solve and interpret the various applications.

# MAT285 - Differential Equations

## Overview

**Course Description**
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.

## Credit Hours

3

**Course Typically Offered**
Fall, Spring

## Requisites

**Simple Requisites**

**State prerequisite**
**Type**
Prerequisite

Take MAT-272

Take MAT-272(S13612);

## Student Learning Outcomes

**Objectives**
Find general solutions to first-order, second-order, and higher-order homogeneous and non-homogeneous differential equations by manual and technology-based methods.

**Objectives**
Identify and apply initial and boundary values to find particular solutions to first-order, second-order, and higher order homogeneous and non-homogeneous differential equations by manual and technology-based methods, and analyze and interpret the results.

**Objectives**
Select and apply appropriate methods to solve differential equations; these methods will include, but are not limited to, undetermined coefficients, variation of parameters, eigenvalues and eigenvectors, LaPlace and inverse LaPlace transforms.

**Objectives**
Select and apply series techniques to solve differential equations; these techniques will include but are not limited to Taylor series.

**Objectives**
Select and apply numerical analysis techniques to solve differential equations; these techniques will include but are not limited to Euler, Improved Euler, and Runge-Kutta.

**Objectives**
Demonstrate proficiency in using CAS technology to analyze, solve and interpret the various applications.

## MAT7025 - Concepts of Essential Math

### Overview

**Course Description**
This course provides an opportunity to customize foundational math content and statistical concepts specific to real-world applications. Topics include decimals, percentages, ratios, proportions, solving basic equations, geometrical concepts, dimensional analysis, financial applications and elements of statistics and probability.

### Credit Hours

0

## MAT7035 - Concepts of Algebra

### Overview

**Course Description**
This course covers algebraic concepts with an emphasis on application and analysis. Topics include rational/radical expressions and equations, solving equations and inequalities, concepts of functions, factoring, and exponents.

### Credit Hours

0

## MAT7045 - Math Skills Support

### Overview

**Course Description**
This course provides opportunities for students to build a stronger foundation for success in their gateway math course by obtaining skills through a variety of instructional strategies. This course will reinforce the content taught in MAT 7025 and MAT 7035. Emphasis is placed on foundational skills as well as concepts, skills, vocabulary and definitions necessary to master student learning outcomes of the gateway math course.

### Credit Hours

0

## MCM111 - Motorcycle Mechanics

### Overview

**Course Description**
This course covers the proper nomenclature of parts and components of motorcycles, ATVs, and personal watercraft. Topics include theory of operation, differences of operation, preventive maintenance, and operating principles involved in servicing and repairing motorcycles, ATVs, and personal watercraft. Upon completion, students should be able to perform basic inspection, diagnosis, repair, and/or adjustment of motorcycles, ATVs, and personal watercraft.

### Credit Hours

7

**Course Typically Offered**
Fall

### Student Learning Outcomes

**Objectives**
Diagnose and correct electrical problems

**Objectives**
Diagnose and correct mechanical problems

**Objectives**
Diagnose and correct fuel system problems

**Objectives**
Use specialized test equipment

**Objectives**
Follow a logical sequence for troubleshooting

## MCM114 - Motorcycle Fuel Systems

### Overview

**Course Description**
This course introduces various types of fuels and fuel systems used in motorcycle internal combustion engines. Emphasis is placed on the theory and principles of carburetion and fuel injection. Upon completion, students should be able to service, disassemble, inspect, reassemble, and adjust to manufacturers' specifications the components of various fuel systems.

### Credit Hours

5

**Course Typically Offered**
Summer

## Student Learning Outcomes

**Objectives**
Define octane ratings and state the factors that affect these ratings

**Objectives**
Explain the primary principles of carburetion operation

**Objectives**
Identify various fuel delivery systems used on motorcycles and ATV's

**Objectives**
Identify the components of each type of carburetor

**Objectives**
Describe the operation of the circuits in 3 types of carburetors

**Objectives**
Service and repair carbureted fuel systems

**Objectives**
Explain the concept of synchronization

**Objectives**
Explain the principles of fuel injection.

**Objectives**
Identify the components of an electronic fuel injection system

**Objectives**
Service and repair fuel injection fuel systems

**Objectives**
Explain the differences between turbo charging and supercharging.

**Objectives**
Identify exhaust system components.

# MCM115 - Motorcycle Chassis

## Overview

**Course Description**
This course covers chassis adjustments, components, and types and uses of frames and suspensions. Emphasis is placed on proper and safe use of tools and equipment in servicing and maintaining motorcycle chassis. Upon completion, students should be able to service and repair motorcycle chassis systems and suspension components.

## Credit Hours

3

**Course Typically Offered**
Fall

## Student Learning Outcomes

**Objectives**
Identify all components in motorcycle chassis and suspension systems

**Objectives**
Identify Basic Frame Types- Recognize common motorcycle frame designsand their basic functions.

**Objectives**
Perform Basic Chassis Inspection- Condfuct simple checks for frame Integrity, suspension condition, and tire wear.

**Objectives**
Service and repair chassis and suspension systems

**Objectives**
Diagnose and correct chassis system and suspension component problems

**Objectives**
Follow a logical sequence for troubleshooting

# MCM117 - Motorcycle Dynamometer Tuning I

## Overview

**Course Description**
This course introduces the theory and safe operation of motorcycle chassis dynamometers. Topics include types of dynamometers, theory of operation, differences of operations, preventative maintenance and safe operating principles involved in motorcycle dynamometer tuning and diagnostics. Upon completions, students should be able to safely use motorcycle dynamometers to measure horsepower and torque, to optimize air-fuel metering and exhaust-flow, and to diagnose performance problems.

## Credit Hours

3

**Course Typically Offered**
Spring

## Student Learning Outcomes

**Objectives**
Identify types of dynamometers.

**Objectives**
Perform preventative maintenance

**Objectives**
Safely operate the dynamometer and associated software.

**Objectives**
Safely install a motorcycle on the dynamometer.

**Objectives**
Measure Horsepower, torque, and air/fuel using the dynamometer.

**Objectives**
Analyze air/fuel metering and exhaust flow.

**Objectives**
Diagnose performance problems.

# MCM122 - Motorcycle Engines

## Overview

**Course Description**
This course covers the construction and operation of components in internal combustion engines used in modern motorcycles. Topics include two- and four-cycle engines, power trains, and final drive systems. Upon completion, students should be able to disassemble, inspect, measure, reassemble, and operationally test two- and four-cycle motorcycle engines.

## Credit Hours

5

**Course Typically Offered**
Spring

## Student Learning Outcomes

**Objectives**
Identify types of engine design in both two-cycle and four-cycle engines

**Objectives**
Troubleshoot both two-cycle and four-cycle engine mechanical problems

**Objectives**
Utilize various techniques in measuring clearances in engine rebuilding

**Objectives**
Identify lubrication system components.

**Objectives**
Rebuild two- and four-cycle engines and powertrains

**Objectives**
Demonstrate and practice proper work safety procedures.

**Objectives**
Practice proper shop and tool safety

# MCM217 - Motorcycle Dynamometer Tuning II

## Overview

**Course Description**
This course provides advanced instruction in motorcycle dynamometers that are utilized in high performance engine tuning. Topics include safe modification and customization of components and their effect on horsepower, torque, air-fuel metering, exhaust flow, fuel economy, acceleration and speed. Upon completions,

students will safely use motorcycle dynamometers to optimize performance when customizing motorcycles and/or ATV's for racing and high performance street or off-road use.

### Credit Hours
3

**Course Typically Offered**
Summer

### Requisites
**Simple Requisites**

**State prerequisite**
**Type**
Prerequisite

Take MCM-117

Take MCM-117;

### Student Learning Outcomes

**Objectives**
Perform preventative maintenance

**Objectives**
Safely install a motorcycle on the dynamometer.

**Objectives**
Safely operate the dynamometer and associated software.

**Objectives**
Modify engine, air-fuel and exhaust components to optimize performance

**Objectives**
Measure Horsepower, torque, and air/fuel using the dynamometer.

**Objectives**
Analyze air/fuel metering through exhaust flow sampling

**Objectives**
Diagnose and correct performance problems.

**Objectives**
Customize and tune an EFI fuel system

## MEC110 - Introduction to CAD/CAM

### Overview
**Course Description**
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.

### Credit Hours
2

**Course Typically Offered**
Spring

### Student Learning Outcomes

**Objectives**
Produce a CAD drawing

**Objectives**
Bring the CAD drawing into CAM

**Objectives**
Produce the necessary CAM files to produce the required CNC program

**Objectives**
Manage the CAD/CAM files on a computer

## MEC111 - Machine Processes I

### Overview
**Course Description**
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.

### Credit Hours
3

**Course Typically Offered**
Fall, Spring

## Student Learning Outcomes

**Objectives**
Practice Safety

**Objectives**
Understand fractions, decimals and metric systems

**Objectives**
Use layout and hand tools

**Objectives**
Use various grinders

**Objectives**
Understand metal finishes

**Objectives**
Operate machines such as Drill Presses, Saws, Lathes and Milling Machines

# MEC142 - Physical Metallurgy

## Overview

**Course Description**
This course covers the heat treating of metals. Emphasis is placed on the effects of hardening, tempering, and annealing on the structure and physical properties of metals. Upon completion, students should be able to heat treat materials.

## Credit Hours

2

**Course Typically Offered**
Fall

## Student Learning Outcomes

**Objectives**
Understand various methods in heat treating

**Objectives**
Understand various forms of structure in metals

**Objectives**
Select proper temperatures for various types of heat treatment

**Objectives**
Identify different properties of heat treatment

**Objectives**
Select different methods of checking hardness

**Objectives**
Understand the importance of proper heat treatment

# MEC161 - Manufacturing Processes I

## Overview

**Course Description**
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.

## Credit Hours

3

**Course Typically Offered**
Spring

## Student Learning Outcomes

**Objectives**
Practice Safety

**Objectives**
Understand fractions, decimals and metric systems

**Objectives**
Use practical measuring tools

**Objectives**
Use layout and hand tools

**Objectives**
Understand various grinders

**Objectives**
Understand metal finishes

**Objectives**
Understand machines as Drill Presses, Saws, Lathes, and Milling Machines

**Objectives**
Distinguish various primary metal working processes.

**Objectives**
Compare and contrast various welding processes.

**Objectives**
Compare and contrast various material finishing

**Objectives**
Compare and contrast testing techniques.

## MEC180 - Engineering Materials

### Overview

**Course Description**
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.

### Credit Hours

3

**Course Typically Offered**
Fall

### Student Learning Outcomes

**Objectives**
Identify and explain the physical and mechanical properties of ferrous metals.

**Objectives**
Identify and explain the physical and mechanical properties of non-ferrous metals.

**Objectives**
Identify and explain the physical and mechanical properties of plastics, composites, ceramics, engineered wood materials.

**Objectives**
Evaluate the effects heat treatments have on various materials.

**Objectives**
Describe and/or conduct the physical procedures required to test these properties to compare and contrast them.

**Objectives**
Summarize the use of engineering materials and the impact in the industry.

**Objectives**
Utilize basic material property tests and select appropriate materials for applications

## MEC275 - Engineering Mechanisms

### Overview

**Course Description**
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.

### Credit Hours

3

**Course Typically Offered**
Spring

### Requisites

**Simple Requisites**

**State prerequisite**
**Type**
Prerequisite

Take One: PHY-131, PHY-151, or PHY-251

Take PHY-131(S20809) PHY-151(S20924) or PHY-251(S12543);

### Student Learning Outcomes

**Objectives**
Mathematically and graphically analyze plane motion on linkages, gears, cams, and belt drives.

## MED110 - Orientation to Medical Assisting

### Overview

**Course Description**
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.

### Credit Hours

1

**Course Typically Offered**
Fall

### Student Learning Outcomes

**Objectives**
Relate the history of medicine to the development of the medical assistant role

**Objectives**
Discuss the educational and certification process of the medical assistant

**Objectives**
Discuss the role and duties of the medical assistant in various health care settings including telephone triage and appointment scheduling

**Objectives**
Explore interpersonal relations including barriers related to multicultural patients.

**Objectives**
Promote team building through professionalism, communication, attitude, and behaviors.

**Objectives**
Project a positive attitude about the role of the medical assistant

**Objectives**
Promote the profession of medical assisting.

## MED116 - Introduction to Anatomy & Physiology

### Overview

**Course Description**
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.

### Credit Hours

4

### Requisites

**Simple Requisites**

**Prerequisite**
**Type**
Prerequisite

Take RED-080 ENG-090;

## MED118 - Medical Law and Ethics

### Overview

**Course Description**
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.

### Credit Hours

2

**Course Typically Offered**
Fall, Spring, Summer

### Student Learning Outcomes

**Objectives**
Distinguish between law, morals, ethics, and etiquette

**Objectives**
Relate principles of the legal relationship of the physician and medical assistant to the patient

**Objectives**
Apply the laws applicable to the medical office in areas of contractual agreements, professional liability, malpractice, medical practice acts informed consent, confidentiality, etc.

**Objectives**
Use the ethical decision-making process in common bioethical issues of today's health care arena

**Objectives**
Weigh the impact of economics in the making of ethical and legal decisions as they apply to the medical office environment

**Objectives**
Recognize legal, ethical, and moral obligation(s) to self, patient, physician, and state.

**Objectives**
Analyze conflict between personal and professional ethics and morals

**Objectives**
Demonstrate a professional attitude necessary to provide nonbiased and competent care within the legal scope of practice of the health provider

**Objectives**
Meet the legal and ethical responsibilities of multi-skilled health professionals.

# MED121 - Medical Terminology I

## Overview

**Course Description**
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.

## Credit Hours

3

**Course Typically Offered**
Fall, Spring, Summer

## Student Learning Outcomes

**Objectives**
Utilize word building rules to build appropriate medical words

**Objectives**
Utilize prefixes, suffixes, and whole-body terminology to build medical terms

**Objectives**
Diagram medical terms, labeling the word part and identifying body parts and organ in diagram pictures

**Objectives**
Relate common medical terms to the anatomy and physiology of each body system

**Objectives**
Relate common medical terms to specialty areas of practice

**Objectives**
Pronounce, spell, and define medical terms as related to all body systems and their pathological disorders

**Objectives**
Define both medical terms and abbreviations related to all body systems.

# MED122 - Medical Terminology II

## Overview

**Course Description**
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.

## Credit Hours
3

**Course Typically Offered**
Fall, Spring, Summer

## Requisites
**Simple Requisites**

**State prerequisite**
**Type**
Prerequisite

Take MED-121

Take MED-121;

## Student Learning Outcomes

**Objectives**
Utilize word building rules to build appropriate medical words

**Objectives**
Utilize prefixes, suffixes, and whole-body terminology to build medical terms

**Objectives**
Diagram medical terms, labeling the word part and identifying body parts and organ in diagram pictures

**Objectives**
Relate common medical terms to the anatomy and physiology of each body system

**Objectives**
Relate common medical terms to specialty areas of practice

**Objectives**
Pronounce, spell, and define medical terms as related to all body systems and their pathological disorders

**Objectives**
Define both medical terms and abbreviations related to all body systems.

# MED130 - Administrative Office Procedures I

## Overview
**Course Description**
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.

## Credit Hours
2

**Course Typically Offered**
Fall

## Student Learning Outcomes

**Objectives**
Explain the role of a skilled medical assistant as relates to performance of assigned duties under the guidance of an employing/supervising physician.

**Objectives**
Relate the knowledge and perform administrative and clinical techniques learned in the educational program, with a degree of competence appropriate for safe and effective office management and patient care.

**Objectives**
Develop a working knowledge of computing concepts, components and basic office applications.

**Objectives**
Interpret verbal and written communication relevant to safe and effective medical office and patient care practices.

**Objectives**
Comply at all times with legal, ethical and professional guidelines as a member of a health care service profession.

**Objectives**
Develop necessary computer skills to schedule appointments, process billing, and code and process insurance accounts and provide written documentation in the medical assisting setting.

**Objectives**
Apply clinical, administrative and laboratory skills within the clinical practicum to satisfy the competency requirement for program completion.

## MED131 - Administrative Office Procedures II

### Overview

**Course Description**
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.

### Credit Hours

2

**Course Typically Offered**
Fall

### Requisites

**Simple Requisites**

**Prerequisite**
**Type**
Prerequisite

None Take MED-130;

Take MED-130;

### Student Learning Outcomes

**Objectives**
Demonstrate knowledge of the basic types of health insurance

**Objectives**
Identify HIPAA's primary objectives.

**Objectives**
Demonstrate knowledge of ICD-10 CM and CPT-4 procedural coding from course documents as applicable in medical billing.

**Objectives**
State the basic purposes and components of a medical record.

**Objectives**
Describe the two basic types of health plans and how thy function.

**Objectives**
Explain the origin and evolution of the CMS-1500

**Objectives**
Discuss health care reform and preexisting conditions.

**Objectives**
Explain the concept of managed care

**Objectives**
Discuss the role of Military Health program, Medicare and Medicaid.

## MED140 - Examining Room Procedures I

### Overview

**Course Description**
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.

### Credit Hours

5

**Course Typically Offered**
Fall

## Student Learning Outcomes

**Objectives**
Demonstrate proficiency with blood-borne pathogens, infection control, asepsis, sterilization and disinfection.

**Objectives**
Describe the infection cycle, including the infectious agent, reservoir, susceptible host, means of transmission, the portal of entry, and portals of exit

**Objectives**
Match the use of Personal Protective Equipment (PPE) to the appropriate procedure

**Objectives**
Demonstrate proficiency in assessing and charting patient vital signs.

**Objectives**
Demonstrate clinical proficiency in the area of specialty examination(s), diagnostic testing, and procedures related to the medical office. This includes familiarization with and application of equipment, supplies, room or procedure preparation, exam/ treatment assistance including positioning, patient support, and patient education.

**Objectives**
Demonstrate proficiency with preparation and administration of medications

**Objectives**
Demonstrate competence in exam room procedures

**Objectives**
Identify measurement systems

**Objectives**
Define basic units of measurement in metric, apothecary, and household systems

**Objectives**
Identify both abbreviations and symbols used in calculating medication dosages

# MED150 - Laboratory Procedures I

## Overview

**Course Description**
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.

## Credit Hours

5

**Course Typically Offered**
Fall, Spring

## Student Learning Outcomes

**Objectives**
Follow OSHA guidelines for blood-borne pathogen safety by selecting and using appropriate personal protective equipment (PPE) in clinical settings.1.

**Objectives**
Discuss infection control procedures.

**Objectives**
Perform specimen collection procedures, including providing clear patient instructions for proper sample collection and safe handling collection techniques.

**Objectives**
Discuss the application of Standard Precautions with regard to: - All Body fluids, secretions and excretions - Blood - Non-intact skin - Mucous membranes

**Objectives**
Conduct microscopic analysis of urinalysis and hematology samples, accurately identifying key components and abnormalities.

**Objectives**
Discuss quality control issues related to handling microbiological specimens.

**Objectives**
Identify disease processes that are indications for CLIA waived test.

**Objectives**
Identify the role of the Center for Disease Control (CDC) regulations in healthcare settings.

**Objectives**
Deliver physician-analyzed test results to patients using clear, professional, and compassionate communication.

## MED232 - Medical Insurance Coding

### Overview

**Course Description**
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.

### Credit Hours

2

**Course Typically Offered**
Spring

### Student Learning Outcomes

**Objectives**
Explain the organization of the ICD-10-CM Tabular list of Diseases, Index to Diseases, and index to procedure and tabular list to procedures.

**Objectives**
Apply guidelines for coding and reporting when assigning ICD-10-CM codes.

**Objectives**
Explain coding conventions.

**Objectives**
Assign ICD-10-CM diagnosis codes for outpatient and physician office care.

**Objectives**
Explain the organization, format and content of CPT.

**Objectives**
Assign CPT procedure and service codes for outpatient care.

**Objectives**
Understand and explain the development of ICD-10CM

## MED240 - Examining Room Procedures II

### Overview

**Course Description**
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.

### Credit Hours

5

**Course Typically Offered**
Spring

### Requisites

**Simple Requisites**

**State prerequisite**
**Type**
Prerequisite

Take MED-140

Take MED-140;

### Student Learning Outcomes

**Objectives**
Identify the classifications of medications, including desired effects, side-effects and adverse reactions

**Objectives**
Describe the relationship between anatomy and physiology of all body systems and medications used for treatment in each

**Objectives**
Maintain growth charts

**Objectives**
Describe the electrical conduction system of the heart.

**Objectives**
Describe the Medical Assistant's role in assisting with Pulmonary procedures

**Objectives**
Assist with examinations and procedures

# MED260 - MED Clinical Practicum

## Overview

**Course Description**
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.

## Credit Hours

5

**Course Typically Offered**
Summer

## Requisites

**Simple Requisites**

**Local**
**Type**
Prerequisite

MED-150 MED-240

Take MED-150 MED-240;

## Student Learning Outcomes

**Objectives**
Explain the role of a skilled medical assistant as relates to performance of assigned duties under the guidance of an employing/supervising physician.

**Objectives**
Relate the knowledge and perform administrative and clinical techniques learned in the educational program, with a degree of competence appropriate for safe and effective office management and patient care.

**Objectives**
Develop a working knowledge of computing concepts, components and basic office applications.

**Objectives**
Interpret verbal and written communication relevant to safe and effective medical office and patient care practices.

**Objectives**
Comply at all times with legal, ethical and professional guidelines as a member of a health care service profession.

**Objectives**
Develop necessary computer skills to schedule appointments, process billing, and code and process insurance accounts and provide written documentation in the medical assisting setting.

**Objectives**
Apply clinical, administrative and laboratory skills within the clinical practicum to satisfy the competency requirement for program completion.

**Objectives**
Demonstrate clinical, laboratory, and administrative skills in a medical facility.

**Objectives**
Participate in professional communications and interactions.

**Objectives**
Function as an entry-level health care professional.

## MED264 - Medical Assisting Overview

### Overview

**Course Description**
This course provides an overview of the complete medical assisting curriculum. Emphasis is placed on all facets of medical assisting pertinent to administrative, laboratory, and clinical procedures performed in the medical environment. Upon completion, students should be able to demonstrate competence in the areas covered on the national certification examination for medical assistants.

### Credit Hours

2

**Course Typically Offered**
Summer

### Student Learning Outcomes

**Objectives**
Knowledge of the basic word structure including prefixes, suffixes, plurals, abbreviations and symbols.

**Objectives**
Understand terms relating to physical descriptions, conditions, diseases, and surgical, diagnostic, and treatment procedures.

**Objectives**
Have the basic knowledge of the body as a whole- vocabulary, planes, directions, and divisions, structures of the body and body systems and their related conditions and

**Objectives**
Have the basic knowledge of the body as a whole- vocabulary, planes, directions, and divisions, structures of the body and body systems and their related conditions and diseases.

**Objectives**
Knowledge of the Medical code of ethics, legal guidelines for professional and patient rights. Understand the results of noncompliance with federal and state laws.

**Objectives**
Name the regulatory agencies for public health, patient rights and employee safety.

**Objectives**
Apply professional oral and written communication standards to administrative office tasks. Knowledge of basic methods of bookkeeping, accounts receivable and payable, tasks. Knowledge of basic methods of bookkeeping, accounts receivable and payable, debt collection and banking guidelines

**Objectives**
Understand the filing guidelines, filing systems for patient records and the different types

**Objectives**
Be able to recognize documentation errors and corrections.

## MED270 - Symptomatology

### Overview

**Course Description**
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.

### Credit Hours

3

**Course Typically Offered**
Fall

## Student Learning Outcomes

**Objectives**
Understand the concept of Human Diseases, Disorders, and Syndromes of the

**Objectives**
Understand the filing guidelines, filing systems for patient records and the different types and purposes of the medical record.

**Objectives**
Identify and explain the etiology, pathology, and predisposing factors related to the different diseases within the body systems.

**Objectives**
Understand and explain the difference between diagnosis, prognosis, and treatment of a disease.

**Objectives**
Describe common tests used to treat the diseases of the body.

**Objectives**
Identify the basic changes in the body during the aging process.

**Objectives**
Describe the curative, palliative, and preventive methods used to treat diseases.

**Objectives**
Identify the common laboratory test used to identify pathogenic organisms.

**Objectives**
Identify the common signs and symptoms associated with the diseases of the body.

**Objectives**
Define the terminology common to the different diseases and disorders of the systems.

# MED272 - Drug Therapy

## Overview

**Course Description**
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.

## Credit Hours

3

**Course Typically Offered**
Spring

## Student Learning Outcomes

**Objectives**
Recognize major drug groups, including their side effects, interactions, and methods of administration.

**Objectives**
Recognize special considerations for drug administration.

**Objectives**
Apply theoretical principles and methods for safe drug administration.

**Objectives**
Accurately calculate drug dosages.

**Objectives**
Apply principles of proper documentation regarding drug administration.

**Objectives**
Understand the effects/side effects of medication on the body systems.

# MED274 - Diet Therapy/Nutrition

## Overview

**Course Description**
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.

### Credit Hours
3

**Course Typically Offered**
Spring

### Student Learning Outcomes

**Objectives**
Define nutrition, dietetics, registered dietitian, public health nutritionist, macro-nutritionist, and micro-nutritionist.

**Objectives**
State the physical characteristics of good nutritional status.

**Objectives**
State the physical characteristics of poor nutritional status.

**Objectives**
State how increased scientific knowledge has changed Americans attitudes regarding health and nutrition.

**Objectives**
State the changes in Americans' approach to health care in the last 10 years. • Describe changes in food technology that have had an impact on the nutrition of the American public.

**Objectives**
List the major U.S. health problems and any possible relationship to nutrition. • Explain the meaning of Recommended Dietary Allowance (RDAs) and how the RDA came into existence.

**Objectives**
Describe what the basic for food groups mean.

**Objectives**
Explain how to use the Food Guide Pyramid.

**Objectives**
List the U.S. Dietary Guidelines.

**Objectives**
Identify the exchange lists and the foods found in each.

**Objectives**
List the dietary guidelines for heart prevention and for cancer prevention.

## MED276 - Patient Education

### Overview

**Course Description**
This course is designed to provide communication skills, basic education principles, and knowledge of available community resources and to apply this knowledge to the clinical setting. Emphasis is placed on identifying appropriate community resources, developing patient education materials, and perfecting written and oral communication skills. Upon completion, students should be able to instruct, communicate effectively, and act as a liaison between the patient and community agencies.

### Credit Hours
2

**Course Typically Offered**
Fall

### Student Learning Outcomes

**Objectives**
Maintain a professional appearance and punctuality.

**Objectives**
Demonstrate strong work ethic and legal principles in the delivery of patient care.

**Objectives**
Demonstrate strong critical thinking and problem-solving skills.

**Objectives**
Adequately perform medical administrative and clinical duties to include: basic practice finances, managed care/insurance, procedural and diagnostic coding, vital signs, injections and laboratory procedures including phlebotomy.

**Objectives**
Adequately write and verbally communicate with patients, coworkers, and employers.

**Objectives**
Comply and adhere to OSHA standards.

## MHA140 - Introduction to Mental Health

### Overview

**Course Description**
This course provides a comprehensive overview of mental health and wellness and the roles, duties, and ethical aspects of providing mental health services. Topics include the history of mental health services, common mental health challenges, professional qualifications, and current trends. Upon completion, students should be able to discuss the impact of mental health, examine various treatment settings, and analyze the requirements for providing mental health services in public, private, nonprofit, and community environments.

### Credit Hours

3

**Course Typically Offered**
Fall

## MHA150 - Mental Health Interventions

### Overview

**Course Description**
This course provides exposure to different mental health treatment and intervention modalities. Topics include professional and self-help forms of intervention. Upon completion, students should be able to apply culturally competent mental health intervention principles to individuals and groups in a variety of treatment settings.

### Credit Hours

3

## MHA238 - Psychopathology

### Overview

**Course Description**
This course examines the development and use of DSM/ICD in the mental health setting to establish a common language. Emphasis is placed on history, terminology, and assessment practices associated with the DSM/ICD in the treatment of psychological disorders. Upon completion, students should be able to explain the core vocabulary of treatment approaches and their applications.

### Credit Hours

3

**Course Typically Offered**
Spring

### Student Learning Outcomes

**Objectives**
Describe the Diagnostic and Statistical Manual of Mental Disorders (DSM) and the International Classification of Diseases (ICD) in the mental health field.

**Objectives**
Examine the key terminology, limitations, and diagnostic criteria used in the DSM-IV/ICD.

**Objectives**
Apply knowledge to effectively communicate with colleagues and interdisciplinary teams.

**Objectives**
Evaluate the implications of DSM-IV/ICD diagnoses for treatment planning and intervention strategies.

**Objectives**
Describe emerging trends and debates in the field of mental health.

## MHA240 - Advocacy

### Overview

**Course Description**
This course covers the roles and duties of the individual and community advocate. Topics include treatment planning, needs assessment, referral procedures, and follow-up and integration of services. Upon completion, students should be able to effectively advocate for the care of the whole person and community.

### Credit Hours

3

## MKT120 - Principles of Marketing

### Overview

**Course Description**
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.

### Credit Hours

3

**Course Typically Offered**
Fall, Spring, Summer

### Student Learning Outcomes

**Objectives**
Define the role of marketing in business.

**Objectives**
Explain the role of selling, customer relations and product management in marketing.

**Objectives**
Describe marketing.

**Objectives**
Define pricing and channel management strategies.

**Objectives**
Discuss how markets are segmented and targeted

**Objectives**
Evaluate the quality of basic market research

**Objectives**
Explain how new products are developed and managed

**Objectives**
Indentify the value of distribution channels and how they are selected

**Objectives**
Explain the basic methods of determining prices

**Objectives**
Identify the different roles of the elements of the promotion mix

**Objectives**
Evaluate a basic marketing program

## MKT123 - Fundamentals of Selling

### Overview

**Course Description**
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.

### Credit Hours

3

## MKT220 - Advertising and Sales Promotion

### Overview

**Course Description**
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.

### Credit Hours

3

**Course Typically Offered**
Spring

### Student Learning Outcomes

**Objectives**
Explain use of advertising and sales promotion as a marketing tool.

**Objectives**
Describe advertising and sales promotional appeals.

**Objectives**
Explain appropriate selection of media.

**Objectives**
Discuss means of testing effectiveness of advertising and sales promotion.

**Objectives**
Explain advertising and the advertising industry

**Objectives**
Discuss segmentation and targeting of markets as well as the marketing mix

**Objectives**
Describe communication process and consumer behavior

**Objectives**
Discuss the importance of planning in order to properly execute integrated marketing communication (IMC)

## MKT223 - Customer Experience

### Overview

**Course Description**
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.

### Credit Hours

3

**Course Typically Offered**
Fall, Spring

### Student Learning Outcomes

**Objectives**
To define customer service.

**Objectives**
To recognize factors responsible for shift to a service culture and explain elements of service culture

**Objectives**
To recognize customer-friendly systems.

**Objectives**
To ensure positive customer interactions.

**Objectives**
To recognize the impact of nonverbal communication on customers.

**Objectives**
To create customer relationships.

**Objectives**
To develop internal customer relationships.

**Objectives**
To recognize need for time management and apply techniques to save time.

**Objectives**
To identify and develop strategies to prevent customer dissatisfaction.

## MKT232 - Social Media Marketing

### Overview

**Course Description**
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.

### Credit Hours

3

**Course Typically Offered**
Spring

### Student Learning Outcomes

**Objectives**
Integrate different social media techniques into a marketing plan.

**Objectives**
Describe social media marketing strategies.

**Objectives**
Create a social media marketing campaign, applying appropriate social media tools.

**Objectives**
Create a plan to improve marketing efforts for businesses using social media.

**Objectives**
To identify various types of social media.

**Objectives**
To identify various types of social media and distinguish among their purposes.

**Objectives**
To determine the types of social media best suited for their business/ organization based on the features of each.

**Objectives**
To utilize one or more types of social media for the student's business (or that one might apply for his future business).

**Objectives**
Demonstrate how to integrate social media into current and existing marketing campaigns.

**Objectives**
Discuss the types of blogging platforms and the apprropiate use of the platforms.

**Objectives**
Utilize tools that analyze, measure, and/or assist in understanding social media successes and value.

**Objectives**
Discuss branding and social media's impact on an organization's branding.

**Objectives**
Explain best practices in branding and developing a brand via social media.

**Objectives**
To explore writing style and adapting it to social media

# MNT110 - Introduction to Maintenance Procedures

## Overview

**Course Description**
This course covers basic maintenance fundamentals for power transmission equipment. Topics include equipment inspection, lubrication, alignment, and other scheduled maintenance procedures. Upon completion, students should be able to demonstrate knowledge of accepted maintenance procedures and practices according to current industry standards.

## Credit Hours

2

**Course Typically Offered**
Fall

## Student Learning Outcomes

**Objectives**
Identify and demonstrate safe practices and procedures with tools, materials and industry accepted test equipment covered in the course.

**Objectives**
Identify and demonstrate use of hand tools.

**Objectives**
Identify grades of bolts and fasteners and demonstrate proper tightening techniques

**Objectives**
Describe the operation of and assemble mechanical power transmissions and systems.

**Objectives**
Identify bearings, seals, gaskets, and packing material and demonstrate appropriate assembly techniques.

**Objectives**
Perform preventative and predictive maintenance and mechanical troubleshooting.

**Objectives**
Build fluid power curicuts on suitcase trainers

**Objectives**
Disassemble, identify, & reassemble reservoirs, valves, actuators, & pumps

**Objectives**
Compare differences of fluid power transfer components

**Objectives**
Identify fitting types and applications for use

**Objectives**
Solve fluid power system equations

## MNT111 - Maintenance Practices

### Overview

**Course Description**
This course provides in-depth theory and practical applications relating to predictive and preventive maintenance programs. Emphasis is placed on equipment failure analysis, maintenance management software, and techniques such as vibration and infrared analysis. Upon completion, students should be able to demonstrate an understanding of modern analytical and documentation methods.

### Credit Hours

3

**Course Typically Offered**
Spring

### Student Learning Outcomes

**Objectives**
Examine differences and applications of maintenance strategies

**Objectives**
Develop a preventive maintenace schedule for a machine (personal vehicle)

**Objectives**
Analyze and contrast service repair principles

**Objectives**
Identify mechanical drive types, lubricants, and ancillary components

**Objectives**
Build a Rube Goldberg machine using the six simple machines

## MNT240 - Indust Equip Troubleshoot

### Overview

**Course Description**
This course covers the various service procedures, tools, instruments, and equipment necessary to analyze and repair typical industrial equipment. Emphasis is placed on electro-mechanical and fluid power equipment troubleshooting, calibration, and repair, including common techniques and procedures. Upon completion, students should be able to troubleshoot and repair industrial equipment.

### Credit Hours

2

**Course Typically Offered**
Spring

### Requisites

**Simple Requisites**

**Prerequisite**
**Type**
Prerequisite

Take ELC-112 or ELC-131

Take ELC-112(S23481) or ELC-131(S23482);

### Student Learning Outcomes

**Objectives**
Interpret scematics and diagrams

**Objectives**
Utilize troubleshooting tools to evaluate equipment

**Objectives**
Test for specific problems and make repairs

**Objectives**
Develop a work log explaining tools, instruments, and procedures used in analysis and repair of equipment

**Objectives**
Analyze efficiency and sustainability techniques

## MSI110 - Military Science I

### Overview

**Course Description**
This course introduces military-style training and confidence building, including military weapons firing, rappelling, and other related material. Emphasis is placed on US Army and ROTC organization, leadership and management techniques, principles of war, evolution of weapons, and military tactics. Upon completion, students should be able to identify and explain the basics of military science and put into practice the art of organizing, motivating, and leading others.

### Credit Hours

1

## MSI120 - Military Science II

### Overview

**Course Description**
This course covers the use of maps and compasses for land navigation, leadership principles and techniques, and military written and oral communication. Topics include orienteering compass techniques, assault boat training, time management, military briefings, and basic survival skills. Upon completion, students should be able to fulfill requirements for entry into the ROTC advanced program and compete for continuing ROTC scholarships.

### Credit Hours

2

## MSI210 - Military Science III

### Overview

**Course Description**
This course emphasizes basic concepts in leadership, team building, and management. Topics include land navigational skills, basic first aid, oral communication, military briefings and personal management skills. Upon completion, students should be able to manage and communicate effectively in a small team environment.

### Credit Hours

2

## MSI220 - Military Science IV

### Overview

**Course Description**
This course completes the preparation for accession into the ROTC advanced program. Topics include introduction to the Leadership Development Program (LDP), operation orders, advance land navigation techniques, small unit tactics, and physical training. Upon completion, students will be eligible to apply for entry into the ROTC Advanced Program.

### Credit Hours

2

## MUS110 - Music Appreciation

### Overview

**Course Description**
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.

### Credit Hours

3

**Course Typically Offered**
Fall, Spring, Summer

### Student Learning Outcomes

**Objectives**
Identify the common orchestral instruments aurally.

**Objectives**
Discuss, orally and in writing, the identifying characteristics of music from the following style periods: Pre-Baroque, Baroque, Classical, Romantic, Impressionistic, and Contemporary.

**Objectives**
Identify aurally musical textures from the above style periods.

**Objectives**
Identify aurally the primary instrumental and vocal compositional forms of the above style periods.

**Objectives**
Identify aurally the compositions on the required listening list: state the composer, title, and movement.

**Objectives**
Evaluate how people and technology have influenced music.

## MUS111 - Fundamentals of Music

### Overview

**Course Description**
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.

### Credit Hours

3

## MUS112 - Introduction to Jazz

### Overview

**Course Description**
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.

### Credit Hours

3

**Course Typically Offered**
Fall, Spring, Summer

### Student Learning Outcomes

**Objectives**
Identify, orally and in writing, the defining characteristics of jazz.

**Objectives**
Identify aurally the musical textures of jazz.

**Objectives**
Identify and define the styles, major artists, techniques and components of jazz.

**Objectives**
Write reviews of live and recorded jazz performances.

**Objectives**
Compare events in jazz to events in American and world history.

**Objectives**
Evaluate how people and technology have influenced jazz.

## MUS210 - History of Rock Music

### Overview

**Course Description**
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.

### Credit Hours

3

**Course Typically Offered**
Fall

### Student Learning Outcomes

**Objectives**
Define the vocabulary of musical elements

**Objectives**
Aurally identify musical elements of Rock style from various genres and eras

**Objectives**
Relate and evaluate Rock music within societal and cultural contexts

**Objectives**
Demonstrate an understanding of the history of rock music

**Objectives**
Identify songs and musicians from different genres of Rock music

## NAS101 - Nurse Aide I

### Overview

**Course Description**
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.

### Credit Hours
6

**Course Typically Offered**
Fall, Spring

### Student Learning Outcomes

**Objectives**
Defined the ethical, legal, and professional responsibilities of a nursing assistant.

**Objectives**
Demonstrated competency in nursing assistant theory and principles.

**Objectives**
Demonstrated competency in activity of daily living skills.

**Objectives**
Completed the required clinical rotation hours.

## NAS102 - Nurse Aide II

### Overview

**Course Description**
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.

### Credit Hours
6

### Requisites

**Simple Requisites**

**State prerequisite**
**Type**
Prerequisite

Take NAS-101

Take NAS-101(S24247);

## NET125 - Introduction to Networks

### Overview

**Course Description**
This course offers a detailed exploration of the architecture, structure, functions, components, and operating models of the Internet and other computer networks. Topics include the essentials of IP addressing, Ethernet basics, various media types, and network operations. Upon completion, students should be able to build/ troubleshoot simple Local Area Networks (LANs), develop effective IP addressing schemes, and configure routers and switches.

### Credit Hours
3

## NET126 - Switching and Routing

### Overview

**Course Description**
This course covers the architecture, components, and operations of routers and switches in small networks and introduces wireless local area networks (WLAN) and security concepts. Emphasis is placed on configuring and troubleshooting routers and switches for advanced functionality using security best practices and resolving common network issues utilizing both IPv4 and IPv6 protocols. Upon completion, students should be able to configure VLANs and Inter-VLAN routing applying security best practices, troubleshoot inter-VLAN routing on Layer 3 devices, configure redundancy on a switched network using STP and EtherChannel, configure WLANs using a WLC and L2 security best practices and configure IPv4 and IPv6 static routing on routers.

### Credit Hours
3

## NET225 - Enterprise Networking

### Overview

**Course Description**
This course is designed to cover the architecture, components, operations, and security to scale for large, complex networks, including wide area network (WAN) technologies. Emphasis is placed on configuring, troubleshooting, and securing enterprise network devices and understanding how application programming interfaces (API) and configuration management tools enable network automation. Upon completion, students should be able to configure link state routing protocols, implement ACLs to filter traffic and secure administrative access, configure NAT services on the router to provide address scalability, explain techniques to provide address scalability and secure remote access for WAN, and explain how automation affects evolving networks.

### Credit Hours
3

## NET226 - Network Programmability

### Overview

**Course Description**
This course covers the methodologies and tools of modern software development, applied to IT and Network operations. Emphasis is placed on network programming in current network scripting languages, using GIT and common data formats, deploying applications as containers, using Continuous Integration/ Continuous Deployment (CI/CD) pipelines and automating infrastructure using code. Upon completion, students should be able to use basic Python programming and Linux skills, implement a development environment, use software development and design best practices, create a secure API, use current technologies to deploy and secure applications and compare software testing and deployment methods in automation and simulation environments.

### Credit Hours
3

### Student Learning Outcomes

**Objectives**
Describe and implement spanning tree protocol

**Objectives**
Describe and demonstrate the use of link aggregation

**Objectives**
Describe and demonstrate the use of advanced single-area OSPF

**Objectives**
Describe and demonstrate the use of EIGRP

## NOS120 - Linux Single User

### Overview

**Course Description**
This course provides students with GUI and command line skills for using a Linux machine. Topics include Linux file system and access permissions, desktop or shell environments, command line editors, display servers, expression pattern matching, I/O redirection, and networking. Upon completion, students should be able to demonstrate competency in customizing a Linux system.

### Credit Hours
3

## NOS130 - Windows Single User

### Overview

**Course Description**
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.

### Credit Hours
3

**Course Typically Offered**
Fall, Spring

### Student Learning Outcomes

**Objectives**
Manage software using DNF

**Objectives**
Demonstrate performing basic and advanced Windows installation methods.

**Objectives**
Use the control panel and settings app to manage and configure hardware devices.

**Objectives**
Demonstrate file systems, partitioning, and data storage management, including virtual disks and backing up and restoring data.

**Objectives**
Demonstrate implementation of Security Features of Windows.

**Objectives**
Use the Microsoft Management Console and Snap-Ins to perform administrative tasks, including user accounts and group administration, assigning NTFS permissions, configuring local security policies, monitoring events and resources.

**Objectives**
Describe the boot process.

**Objectives**
Configure networking, and printing for Windows.

**Objectives**
Explain the advantages of DNS, Active Directory Services, and Azure Resources.

## NOS220 - Linux Administration I

### Overview

**Course Description**
This course covers advanced skills needed to successfully administer a Linux system. Topics include installation, file system creation/maintenance, storage, network configuration, user interface configuration, and security. Upon completion, students should be able to perform administrative tasks on a Linux system in a network environment.

### Credit Hours

3

## NOS230 - Windows Administration I

### Overview

**Course Description**
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.

### Credit Hours

3

**Course Typically Offered**
Fall, Spring

### Student Learning Outcomes

**Objectives**
Install and Configure Server Roles in Windows Server Operating System

**Objectives**
Configure basic server settings on Microsoft Windows Server OS.

**Objectives**
Create and Configure an Active Directory domain on Microsoft Windows Server OS.

**Objectives**
Configure Group Policy on the Active Directory domain on Microsoft Windows Server OS.

**Objectives**
Create and manage accounts on the Active Directory domain on Microsoft Windows Server OS.

**Objectives**
Design a DNS namespace, given a network scenario.

**Objectives**
Design a DHCP addressing scheme, given a network scenario.

**Objectives**
Configure the Remote Desktop Services role on Microsoft Windows Server OS.

**Objectives**
Design a folder sharing strategy, given a network scenario.

**Objectives**
Design a backup strategy, given a network scenario.

## NUR101 - Practical Nursing I

### Overview

**Course Description**
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 assessment, clinical decision making, professional behaviors, caring interventions, biophysical and psychosocial concepts, communication, collaboration, teaching/learning, safety, ethical principles, legal issues, informatics, and evidence-based practice. Upon completion, students should be able to provide safe nursing care across the lifespan incorporating the concepts identified in this course.

### Credit Hours

11

**Course Typically Offered**
Fall

## Student Learning Outcomes

**Objectives**
Course Objective I - Individual Domain: Upon completion of the course, the learner will be able to relate to the individual as a holistic, complex, multidimensional, unique, and significant being.

**Objectives**
OB1SLO1 Articulate all concepts within the domain of the healthy individual.

**Objectives**
OB1SLO2 Understand all concepts within the domain of the healthy individual.

**Objectives**
OB1SLO3 Identify the internal, external, and environmental factors that impact the health and well-being of individuals.

**Objectives**
Course Objective II - Nursing Domain: Upon completion of the course, the learner will be able to internalize foundational principles of professional nursing practice to provide safe, culturally competent, therapeutic care for individuals

**Objectives**
OB2SLO1 Demonstrate an awareness of the values, attitudes, behaviors, and beliefs important to professional nursing.

**Objectives**
OB2SLO2 Utilize all concepts within the domain of nursing to safely provide therapeutic care to individuals with basic health care needs.

**Objectives**
OB2SLO3 Participate in the nursing process within the scope of practice of the practical nurse.

**Objectives**
OB2SLO4 Perform data collection and caring nursing interventions for holistic care of individuals.

**Objectives**
OB2SLO5 Communicate professionally and effectively while providing care to individuals with basic health care needs.

**Objectives**
OB2SLO6 Promote the acquisition of knowledge and learning to enhance self-care for each individual from an established plan as delegated by the RN.

**Objectives**
OB2SLO7 Discuss collaboration with the interdisciplinary healthcare team as assigned by the RN in providing care to individuals.

**Objectives**
Course Objective III - Health Care System Domain: Upon completion of the course, the learner will be able to transfer knowledge of the concepts within the domain of the healthcare system to safely and ethically administer care to the individual.

**Objectives**
OB3SLO1 Demonstrate knowledge of ethical and legal standards that govern the practice of nursing within the healthcare system.

**Objectives**
OB3SLO2 Incorporate informatics to access and communicate client information.

**Objectives**
OB3SLO3 Utilize principles of evidence-based practice while safely providing therapeutic nursing care to individuals in the healthcare system.

**Objectives**
OB3SLO4 Utilize the nursing process to identify hazards and errors within the healthcare system.

**Objectives**
OB3SLO5 Recognize responsibility and accountability for behaviors, actions, judgments, continued learning and self-development.

# NUR102 - Practical Nursing II

## Overview

**Course Description**
This course is designed to further develop the concepts within the three domains of the individual, nursing, and healthcare. Emphasis is placed on the concepts within each domain including clinical decision making, caring interventions, biophysical and psychosocial concepts, communication, collaboration, teaching and learning, accountability, safety, informatics, and evidence-based practice. Upon completion, students should be able to provide safe nursing care across the lifespan incorporating the concepts identified in this course.

## Credit Hours

10

**Course Typically Offered**
Spring

## Requisites

**Simple Requisites**

**State prerequisite**
**Type**
Prerequisite

Take NUR-101

Take NUR-101(S24252);

## Student Learning Outcomes

**Objectives**
Course Objective I - Individual Domain: Upon completion of the course, the learner will further develop knowledge of concepts within the domain of the individual.

**Objectives**
OB1SLO1 Examine the pathophysiology, prevalence, and clinical course of individuals with specific alterations in health impacting quality of life, and the achievement of potential.

**Objectives**
OB1SLO2 Examine internal and external environmental factors that impact the health and well-being of individuals with common health alterations.

**Objectives**
Course Objective II - Nursing Domain: Upon completion of the course, the learner will be able to provide safe, culturally competent, therapeutic nursing care to individuals.

**Objectives**
OB2SLO1 Demonstrate ethical, legal, and professional behaviors specific to the scope of practice of the PN within the healthcare system.

**Objectives**
OB2SLO2 Incorporate all concepts within the domain of nursing to safely provide therapeutic care to individuals with common health alterations.

**Objectives**
OB2SLO3 Practice the role of the practical nurse under the direction and supervision of the registered nurse.

**Objectives**
OB2SLO4 Communicate professionally and effectively while safely providing therapeutic care to individuals with common health alterations.

**Objectives**
OB2SLO5 Apply teaching and learning principles while reinforcing the teaching plan developed by the registered nurse.

**Objectives**
OB2SLO6 Participate in collaboration with the interdisciplinary healthcare team as assigned by the RN in using cost effective nursing strategies and quality improvement processes.

**Objectives**
Course Objective III - Health Care System Domain Upon completion of the course, the learner will be able to safely and ethically provide therapeutic nursing care within the healthcare system for individuals.

**Objectives**
OB3SLO1 Practice safely and ethically within the healthcare system according to the nursing practice act, healthcare system, and National Patient Safety Goals.

**Objectives**
OB3SLO2 Retrieve information about evidence-based healthcare practices from internet sources.

**Objectives**
OB3SLO3 Employ information technology to support problem solving and critical thinking used in clinical decision making.

**Objectives**
OB3SLO4 Suggest changes to the RN for improvement of client care and organizational outcomes.

**Objectives**
OB3SLO5 Utilize educational opportunities for continued learning and self-development.

# NUR103 - Practical Nursing III

## Overview

**Course Description**
This course is designed to assimilate the concepts within the three domains of the individual, healthcare, and nursing. Emphasis is placed on biophysical and psychosocial concepts, professional behaviors, healthcare systems, health policy, and quality improvement. Upon completion, students should be able to demonstrate the knowledge, skills, and attitudes necessary to provide safe, quality, and individualized entry level nursing care.

## Credit Hours

9

**Course Typically Offered**
Summer

## Requisites

**Simple Requisites**

**State prerequisite**
**Type**
Prerequisite

Take NUR-101

Take NUR-101(S24252);

## Student Learning Outcomes

**Objectives**
Course Objective I - Individual Domain:

**Objectives**
Upon completion of the course, the learner will be able to assimilate all concepts within the domain of the individual related to common alterations in health.

**Objectives**
CO1SLO1 Participate in evaluating the concepts of the holistic individual and client response in the promotion of health, wellness, illness, quality of life, and the achievement of potential.

**Objectives**
CO1SLO2 Participate in evaluating the concepts of the holistic individual and client response in the promotion of health, wellness, illness, quality of life, and the achievement of potential.

**Objectives**
Course Objective II - Nursing Domain: Upon completion of the course, the learner will be able to provide safe, culturally competent, therapeutic nursing care to individuals with common health alterations.

**Objectives**
CO2SLO1 Practice professional nursing behaviors, within the legal practice boundaries of the practical nurse, incorporating personal responsibility and accountability for continued competence.

**Objectives**
CO2SLO2 Participate in providing evidence-based nursing care, from an established plan of care, based on biophysical, psychosocial, and cultural needs of clients in various stages of growth and development while assisting them to attain their highest level of wellness.

**Objectives**
CO2SLO3 Participate in the nursing process to provide individualized, safe, and effective nursing care in a structured setting under supervision.

**Objectives**
CO2SLO4 Demonstrate caring behaviors in implementing culturally-competent, client centered nursing care to diverse clients across the lifespan.

**Objectives**
CO2SLO5 Participate in collaboration with the interdisciplinary healthcare team as assigned by the RN to support positive individual and organizational outcomes in a safe and cost effective manner.

**Objectives**
CO2SLO6 Reinforce and/or implement the teaching plan developed and delegated by the registered nurse to promote the health of individuals, incorporating teaching and learning principles.

**Objectives**
CO2SLO7 Participate in collaboration with the interdisciplinary healthcare team as assigned by the RN to support positive individual and organizational outcomes in a safe and cost effective manner.

**Objectives**
Course Objective III - Health Care System Domain Upon completion of the course, the learner will be able to safely and provide therapeutic nursing care within the healthcare system for individuals with common alterations in health.

**Objectives**
CO3SLO1 Practice professional nursing behaviors, within the legal practice boundaries of the practical nurse, incorporating personal responsibility and accountability for continued competence.

**Objectives**
CO3SLO2 Utilize informatics to access, manage, and communicate client information and validate best practices.

**Objectives**
CO3SLO3 Participate in providing evidence-based nursing care, from an established plan of care, based on biophysical, psychosocial, and cultural needs of clients in various stages of growth and development while assisting them to attain their highest level of wellness.

**Objectives**
CO3SLO4 Participate in Quality Improvement (QI) by identifying hazards and error and by suggesting, to the RN, changes to improve the client care process.

**Objectives**
CO3SLO5 Practice professional nursing behaviors, within the legal practice boundaries of the practical nurse, incorporating personal responsibility and accountability for continued competence.

# NUR111 - Introduction to Health Concepts

## Overview

**Course Description**
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.

## Credit Hours

8

**Course Typically Offered**
Fall

## Student Learning Outcomes

**Objectives**
Objective I: Upon completion of the course, and external environment and individuals with simple alterations in health.

**Objectives**
OB1SLO1 Articulate all concepts within the domain of the healthy individual.

**Objectives**
OB1SLO2 Distinguish between the healthy individual within a changing internal and external environment and individuals with simple alterations in health.

**Objectives**
Objective II: Upon completion of the course, the learner will be able to internalize foundational principles of professional nursing practice to provide safe, culturally competent, therapeutic care for individuals.

**Objectives**
OB2SLO1 Receive an awareness of the values, attitudes, behaviors, and beliefs important to professional nursing.

**Objectives**
OB2SLO2 Incorporate all concepts within the domain of nursing to safely provide therapeutic care to individuals.

**Objectives**
OB2SLO3 Competently perform holistic assessments, caring nursing interventions, and clinical decision-making.

**Objectives**
OB2SLO4 Communicate professionally and effectively while providing care to individuals.

**Objectives**
OB2SLO5 Effectively collaborate with the individual/individuals and members of the interdisciplinary healthcare team to safely provide therapeutic care.

**Objectives**
OB2SLO6 Facilitate the acquisition of knowledge and learning to enhance self-care for each individual.

**Objectives**
OB2SLO7 Collaboratively manage care of individuals.

**Objectives**
Objective III: Upon completion of the course, the learner will be able to transfer knowledge of the concepts within the domain of the healthcare system to safely and ethically administer care to the individual

**Objectives**
OB3SLO1 Practice safely, legally and ethically within the healthcare system according to the nursing practice act, healthcare policy, and National Patient Safety Goals.

**Objectives**
OB3SLO2 Employ information technology to support clinical decision making.

**Objectives**
OB3SLO3 Utilize principles of evidence-based practice while v

# NUR112 - Health-Illness Concepts

## Overview

**Course Description**
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.

## Credit Hours
5

**Course Typically Offered**
Spring

## Requisites
**Simple Requisites**

**State prerequisite**
**Type**
Prerequisite

Take NUR-111

Take NUR-111;

## Student Learning Outcomes

**Objectives**
Objective I: Upon completion of the course, the learner will further develop knowledge of concepts within the domain of the individual.

**Objectives**
further develop knowledge of concepts within the domain of the individual.

**Objectives**
OB1SLO1 Examine the pathophysiology, prevalence and clinical course of individuals with specific alterations in health.

**Objectives**
OB1SLO2 Differentiate between the healthy individual and those individuals experiencing alterations in health.

**Objectives**
OB1SLO3 Detect changes within the internal and external environment of the individual with these alterations.

**Objectives**
OB1SLO4 Correlate diagnostic tests and procedures with the identified alterations.

**Objectives**
Objective II: Upon completion of the course, the learner will be able to provide safe, culturally competent, therapeutic nursing care to individuals.

**Objectives**
OB2SLO1 Respond to situations with an awareness of the values, attitudes, behaviors, and beliefs important to professional nursing.

**Objectives**
OB2SLO2 Incorporate all concepts within the domain of nursing to safely provide therapeutic care to individuals with alterations in health.

**Objectives**
OB2SLO3 Communicate professionally and effectively while safely providing therapeutic care to individuals with alterations.

**Objectives**
OB2SLO4 Effectively collaborate with the individual/individuals and members of the interdisciplinary healthcare team to provide therapeutic care.

**Objectives**
OB2SLO5 Develop a teaching plan for individuals incorporating teaching and learning principles.

**Objectives**
OB2SLO6 Collaboratively manage care of the individual with increasing alterations in health.

**Objectives**
Objective III: Upon completion of the course, the learner will be able to safely and ethically execute the management of therapeutic nursing care within the healthcare system for individuals.

**Objectives**
OB3SLO1 Practice safely, legally and ethically within the healthcare system according to the healthcare concepts, nursing practice act, healthcare policy, and National Patient Safety Goals.

**Objectives**
OB3SLO2 Employ information technology to support clinical decision-making.

**Objectives**
OB3SLO3 Utilize principles of evidence-based practice while safely providing therapeutic nursing care to individuals in the healthcare system.

**Objectives**
OB3SLO4 Advocate, protect, and support the individual's rights and interests.

**Objectives**
OB3SLO5 Accept accountability for behavior, actions and judgments.

# NUR113 - Family Health Concepts

## Overview

**Course Description**
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.

## Credit Hours

5

**Course Typically Offered**
Summer

## Requisites

**Simple Requisites**

**State prerequisite**
**Type**
Prerequisite

Take NUR-111

Take NUR-111;

## Student Learning Outcomes

**Objectives**
Objective I: Upon completion of the course, the learner will further develop knowledge of concepts within the domain of the individual.

**Objectives**
OB1SLO1 Examine the pathophysiology, prevalence and clinical course of individuals with specific alterations in health.

**Objectives**
OB1SLO2 Differentiate between the healthy individual and those individuals experiencing alterations in health.

**Objectives**
OB1SLO3 Detect changes within the internal and external environment of the individual with these alterations.

**Objectives**
OB1SLO4 Correlate diagnostic tests and procedures with the identified alterations. Objective II: OB1SLO5 Upon completion of the course, the learner will be able to provide safe, culturally competent, therapeutic nursing care to individuals.

**Objectives**
Objective II:

**Objectives**
OB2SLO1 Respond to situations with an awareness of the values, attitudes, behaviors, and beliefs important to professional nursing.

**Objectives**
OB2SLO2 Incorporate all concepts within the domain of nursing to safely provide therapeutic care to individuals with alterations in health.

**Objectives**
OB2SLO3 Communicate professionally and effectively while safely providing therapeutic care to individuals with alterations.

**Objectives**
OB2SLO4 Effectively collaborate with the individual/individuals and members of the interdisciplinary healthcare team to provide therapeutic care.

**Objectives**
OB2SLO5 Develop a teaching plan for individuals incorporating teaching and learning principles.

**Objectives**
OB2SLO6 Collaboratively manage care of the individual with increasing alterations in health.

**Objectives**
Objective III: Upon completion of the course, the learner will be able to safely and ethically execute the management of therapeutic nursing care within the healthcare system for individuals.

**Objectives**
OB3SLO1 Practice safely, legally and ethically within the healthcare system according to the healthcare concepts, nursing practice act, healthcare policy, and National Patient Safety Goals.

**Objectives**
OB3SLO2 Employ information technology to support clinical decision-making.

**Objectives**
OB3SLO3 Utilize principles of evidence-based practice while safely providing therapeutic nursing care to individuals in the healthcare system.

**Objectives**
OB3SLO4 Advocate, protect, and support the individual's rights and interests.

**Objectives**
OB3SLO5 Accept accountability for behavior, actions and judgments.

# NUR114 - Holistic Health Concepts

## Overview

**Course Description**
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.

## Credit Hours

5

## Requisites

**Simple Requisites**

**State prerequisite**
**Type**
Prerequisite

Take NUR-111

Take NUR-111;

## Student Learning Outcomes

**Objectives**
Objective I: Upon completion of the course, the learner will further develop knowledge of concepts within the domain of the individual.

**Objectives**
OB1SLO1 Examine the pathophysiology, prevalence and clinical course of individuals with specific alterations in health.

**Objectives**
OB1SLO2 Differentiate between the healthy individual and those individuals experiencing alterations in health.

**Objectives**
OB1SLO3 Detect changes within the internal and external environment of the individual with these alterations.

**Objectives**
OB1SLO4 Correlate diagnostic tests and procedures with the identified alterations.

**Objectives**
Objective II: Upon completion of the course, the learner will be able to provide safe, culturally competent, therapeutic nursing care to individuals.

**Objectives**
OB2SLO1 Respond to situations with an awareness of the values, attitudes, behaviors, and beliefs important to professional nursing.

**Objectives**
OB2SLO2 Incorporate all concepts within the domain of nursing to safely provide therapeutic care to individuals with alterations in health.

**Objectives**
OB2SLO3 Communicate professionally and effectively while safely providing therapeutic care to individuals with alterations.

**Objectives**
OB2SLO4 Effectively collaborate with the individual/individuals and members of the interdisciplinary healthcare team to provide therapeutic care.

**Objectives**
OB2SLO5 Develop a teaching plan for individuals incorporating teaching and learning principles.

**Objectives**
OB2SLO6 Collaboratively manage care of the individual with alterations in health.

**Objectives**
Objective III: Upon completion of the course, the learner will be able to safely and ethically execute the management of therapeutic nursing care within the healthcare system for individuals.

**Objectives**
OB3SLO1 Practice safely and ethically within the healthcare system according to the nursing practice act, healthcare policy, and National Patient Safety Goals.

**Objectives**
OB3SLO2 Employ information technology to support clinical decision-making.

**Objectives**
OB3SLO3 Utilize principles of evidence-based practice while safely providing therapeutic nursing care to individuals in the healthcare system.

**Objectives**
OB3SLO4 Advocate, protect, and support the individual's rights and interests.

**Objectives**
OB3SLO5 Accept accountability for behavior, actions and judgments

# NUR211 - Health Care Concepts

## Overview

**Course Description**
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.

## Credit Hours

5

**Course Typically Offered**
Fall

## Requisites

**Simple Requisites**

**State prerequisite**
**Type**
Prerequisite

Take NUR-111

Take NUR-111;

## Student Learning Outcomes

**Objectives**
Objective I: Upon completion of the course, the learner will further develop knowledge of concepts within the domain of the individual.

**Objectives**
OB1SLO1 Examine the pathophysiology, prevalence and clinical course of individuals with specific alterations in health.

**Objectives**
OB1SLO2 Differentiate between the healthy individual and those individuals experiencing alterations in health.

**Objectives**
OB1SLO3 Detect changes within the internal and external environment of the individual with these alterations.

**Objectives**
OB1SLO4 Correlate diagnostic tests and procedures with the identified alterations.

**Objectives**
Objective II: Upon completion of the course, the learner will be able to provide safe, culturally competent, therapeutic nursing care to individuals.

**Objectives**
OB2SLO1 Respond to situations with an awareness of the values, attitudes, behaviors, and beliefs important to professional nursing.

**Objectives**
OB2SLO2 Incorporate all concepts within the domain of nursing to safely provide therapeutic care to individuals with alterations in health.

**Objectives**
OB2SLO3 Communicate professionally and effectively while safely providing therapeutic care to individuals with alterations.

**Objectives**
OB2SLO4 Effectively collaborate with the individual/individuals and members of the interdisciplinary healthcare team to provide therapeutic care.

**Objectives**
OB2SLO5 Develop a teaching plan for individuals incorporating teaching and learning principles.

**Objectives**
OB2SLO6 Collaboratively manage care of the individual with alterations in health.

**Objectives**
Objective III: Upon completion of the course, the learner will be able to safely and ethically execute the management of therapeutic nursing care within the healthcare system for individuals.

**Objectives**
OB3SLO1 Practice safely, legally and ethically within the healthcare system according to the nursing practice act, healthcare policy, and National Patient Safety Goals.

**Objectives**
OB3SLO2 Employ information technology to support clinical decision-making.

**Objectives**
OB3SLO3 Utilize principles of evidence-based practice while safely providing therapeutic nursing care to individuals in the healthcare system experiencing alterations in health.

**Objectives**
OB3SLO4 Advocate, protect, and support the individual's rights and interests.

**Objectives**
OB3SLO5 Accept accountability for behavior, actions and judgments.

# NUR212 - Health System Concepts

## Overview

**Course Description**
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

## Credit Hours

5

**Course Typically Offered**
Fall

## Requisites

**Simple Requisites**

**State prerequisite**
**Type**
Prerequisite

Take NUR-111

Take NUR-111;

## Student Learning Outcomes

**Objectives**
Objective I: Upon completion of the course, the learner will further develop knowledge of concepts within the domain of the individual.

**Objectives**
OB1SLO1 Examine the pathophysiology, prevalence and clinical course of individuals with specific alterations in health.

**Objectives**
OB1SLO2 Differentiate between the healthy individual and those individuals experiencing alterations in health.

**Objectives**
OB1SLO3 Detect changes within the internal and external environment of the individual with these alterations.

**Objectives**
OB1SLO4 Correlate diagnostic tests and procedures with the identified alterations.

**Objectives**
Objective II: Upon completion of the course, the learner will be able to provide safe, culturally competent, therapeutic nursing care to individuals.

**Objectives**
OB2SLO1 Respond to situations with an awareness of the values, attitudes, behaviors, and beliefs important to professional nursing.

**Objectives**
OB2SLO2 Incorporate all concepts within the domain of nursing to safely provide therapeutic care to individuals with alterations in health.

**Objectives**
OB2SLO3 Communicate professionally and effectively while safely providing therapeutic care to individuals with alterations.

**Objectives**
OB2SLO4 Effectively collaborate with the individual/individuals and members of the interdisciplinary healthcare team to provide therapeutic care.

**Objectives**
OB2SLO5 Develop a teaching plan for individuals incorporating teaching and learning principles.

**Objectives**
OB2SLO6 Develop a teaching plan for individuals incorporating teaching and learning principles.

**Objectives**
OB2SLO7 Collaboratively manage care of the individual with alterations in health.

**Objectives**
Objective III: Upon completion of the course, the learner will be able to safely and ethically execute the management of therapeutic nursing care within the healthcare system for individuals.

**Objectives**
OB3SLO1 Practice safely and ethically within the healthcare system according to the nursing practice act, healthcare policy, and National Patient Safety Goals.

**Objectives**
OB3SLO2 Employ information technology to support clinical decision-making.

**Objectives**
OB3SLO3 Utilize principles of evidence-based practice while safely providing therapeutic nursing care to individuals in the healthcare system.

**Objectives**
OB3SLO4 Advocate, protect, and support the individual's rights and interests.

**Objectives**
OB3SLO5 Accept accountability for behavior, actions and judgments.

**Objectives**
OB3SLO6 Develop a plan for continued professional growth and development.

# NUR213 - Complex Health Concepts

## Overview

**Course Description**
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.

## Credit Hours

10

## Requisites

**Simple Requisites**

**State prerequisite**
**Type**
Prerequisite

Take NUR-111

Take NUR-111;

**State concurrent or previous courses**
**Type**
Corequisite

Take NUR-112, NUR-113, NUR-114, NUR-211 and NUR-212

Take NUR-112 NUR-113 NUR-114 NUR-211 NUR-212;

## Student Learning Outcomes

**Objectives**
Objective I: Upon completion of the course, the learner will be able to assimilate all concepts within the domain of the individual related to complex alterations in health.

**Objectives**
Correlate the inter-relationships of complex pathophysiology and the clinical course of individuals.

**Objectives**
Incorporate knowledge of the concepts of the holistic individual and the inter-play of these concepts in the promotion of health, wellness and illness.

**Objectives**
Distinguish between internal and external environmental factors that impact the health and well-being of individuals.

**Objectives**
Objective II: Upon completion of this course, the learner will be able to provide safe, culturally competent, therapeutic nursing care to individuals with complex alterations in health.

**Objectives**
Practice professional nursing behaviors incorporating personal responsibility and accountability for continued competence.

**Objectives**
Assimilate all concepts within the domain of nursing to provide safe, therapeutic nursing care to individuals.

**Objectives**
Manage healthcare for individuals using cost effective nursing strategies, quality improvement processes, and current technologies.

**Objectives**
Communicate professionally and effectively with the interdisciplinary healthcare team while advocating for the therapeutic care of all individuals.

**Objectives**
Develop a teaching plan for individuals, and /or the nursing team, incorporating teaching and learning principles.

**Objectives**
Objective III: Upon completion of the course, the learner will be able to safely and ethically execute the management of therapeutic nursing care within the healthcare system for individuals with complex alterations in health.

**Objectives**
Practice safely and ethically within the healthcare system according to the nursing practice act, healthcare policy, and National Patient Safety Goals.

**Objectives**
Apply principles of emergency preparedness to safely navigate the care of individuals in the healthcare system.

**Objectives**
Incorporate informatics to formulate evidence-based clinical judgments and management decisions.

# NUR213AC - Complex Health Concepts

## Overview

**Course Description**
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.

## Credit Hours

2

**Course Typically Offered**
Fall, Spring

## Requisites

**Simple Requisites**

**State prerequisite**
**Type**
Prerequisite

Take NUR-111

Take NUR-111;

**State concurrent or previous courses**

**Type**
Corequisite

Take NUR-112, NUR-113, NUR-114, NUR-211 and NUR-212

Take NUR-112 NUR-113 NUR-114 NUR-211 NUR-212;

# NUR213BC - Complex Health Concepts

## Overview

**Course Description**
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.

## Credit Hours

5

**Course Typically Offered**
Spring

## Requisites

**Simple Requisites**

**State prerequisite**
**Type**
Prerequisite

Take NUR-111

Take NUR-111;

**State concurrent or previous courses**
**Type**
Corequisite

Take NUR-112, NUR-113, NUR-114, NUR-211 and NUR-212

Take NUR-112 NUR-113 NUR-114 NUR-211 NUR-212;

# NUR213CC - Complex Health Concepts

## Overview

**Course Description**
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.

## Credit Hours

3

**Course Typically Offered**
Spring

## Requisites

**Simple Requisites**

**State prerequisite**
**Type**
Prerequisite

Take NUR-111

Take NUR-111;

**State concurrent or previous courses**
**Type**
Corequisite

Take NUR-112, NUR-113, NUR-114, NUR-211 and NUR-212

Take NUR-112 NUR-113 NUR-114 NUR-211 NUR-212;

# NUR214 - Nursing Transition Concepts

## Overview

**Course Description**
This course is designed to introduce concepts within the three domains of the individual, healthcare, and nursing as the LPN transitions to the ADN role. Emphasis is placed on the concepts within each domain including evidenced-based practice, quality improvement, communication, safety, interdisciplinary team, clinical decision-making, informatics, assessment, caring, and health-wellness-illness. Upon completion, students should be able to provide safe nursing care incorporating the concepts identified in this course.

## Credit Hours

4

# NUT110 - Nutrition

## Overview

**Course Description**
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.

## Credit Hours

3

**Course Typically Offered**
Fall, Spring, Summer

### Student Learning Outcomes

**Objectives**
Employ mechanisms of quality improvement, cost effective nursing strategies, and current technologies within the healthcare system.

**Objectives**
Collaborate with the interdisciplinary healthcare team, to advocate for positive individual and organizational outcomes.

**Objectives**
Explain the basic components of whole foods nutrition and a holistic lifestyle model

**Objectives**
Define key words/theories such as: holism/holistic, balance, therapeutic cooking, diet vs. dietary approach, quality ingredients, food politics

**Objectives**
Assess, implement and individualize a whole foods diet program

**Objectives**
Create menus, especially for special diets and/or health conditions·

**Objectives**
Increased knowledge of cooking techniques and methods related to health based cuisine

**Objectives**
Keep track of personal food and lifestyle related goals

## OST136 - Word Processing

### Overview

**Course Description**
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 prepared to take a nationally accredited certification exam.

### Credit Hours

3

## OST137 - Office Applications I

### Overview

**Course Description**
This course introduces the concepts and functions of software that meets the changing needs of the office environment through a hands-on approach. Emphasis will be placed on creating professional documents to enhance employability in various offices. Upon completion, students should be prepared to take a nationally accredited certification exam.

### Credit Hours

3

## OST141 - Medical Office Terms I

### Overview

**Course Description**
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.

### Credit Hours

3

**Course Typically Offered**
Fall, Spring

### Student Learning Outcomes

**Objectives**
Prepare a presentation, edit and enhance slides, and customize presentations in MS PowerPoint 2016.

**Objectives**
Demonstrate a working knowledge of integrating MS Word, Excel, Access, and PowerPoint.

**Objectives**
Describe the fundamental elements that are used to build medical words; including prefixes, root words, and suffixes.

**Objectives**
Define both medical terms and abbreviations related to all body systems

**Objectives**
Identify common diseases and disorders of all body systems

## OST142 - Medical Office Terms II

### Overview

**Course Description**
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.

### Credit Hours

3

**Course Typically Offered**
Fall, Spring

### Requisites

**Simple Requisites**

**State prerequisite**
**Type**
Prerequisite

Take One: MED-121 or OST-141

Take MED-121 or OST-141(S24691);

### Student Learning Outcomes

**Objectives**
Construct, spell, and pronounce medical words associated with all body systems

**Objectives**
Relate medical terms to the anatomy and physiology of all body systems

**Objectives**
Describe the fundamental elements that are used to build medical words; including prefixes, root words, and suffixes.

**Objectives**
Define both medical terms and abbreviations related to all body systems

**Objectives**
Identify common diseases and disorders of all body systems

## OST148 - Medical Insurance and Billing

### Overview

**Course Description**
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.

### Credit Hours

3

**Course Typically Offered**
Fall, Summer

### Student Learning Outcomes

**Objectives**
Construct, spell, and pronounce medical words associated with all body systems

**Objectives**
Relate medical terms to the anatomy and physiology of all body systems

**Objectives**
Process third-party claims forms

**Objectives**
Calculate basic healthcare charges and balances

## OST149 - Medical Legal Issues

### Overview

**Course Description**
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.

### Credit Hours
3

**Course Typically Offered**
Fall, Spring, Summer

### Student Learning Outcomes

**Objectives**
Differentiate between private and govermental payers

**Objectives**
Identify proper steps for the reimburcement process

**Objectives**
Distinguish between law, morals, ethics, and etiquette

**Objectives**
Relate principles of the legal relationship of the physician and medical assistant to the patient.

**Objectives**
Apply the laws applicable to the medical office in areas of contractual agreements, professional liability, malpractice, medical practice acts, informed consent, confidentiality, etc.

**Objectives**
Use the ethical decision-making process in common bioethical issues of today's health care arena.

**Objectives**
Weigh the impact of economics in the making of ethical and legal decisions as they apply to the medical office environment.

**Objectives**
Recognize legal, ethical, and moral obligation(s) to self, patient, physician, and state.

## OST164 - Office Editing

### Overview

**Course Description**
This course provides an in-depth exploration of editing skills essential for the office. Emphasis is placed on grammar, punctuation, sentence structure, proofreading, and editing. Upon completion, students should be able to proficiently compose and edit text and documents for the workplace.

### Credit Hours
3

## OST184 - Office Information Management

### Overview

**Course Description**
This course includes the creation, maintenance, protection, security, and disposition of records stored in various media. Topics include alphabetic, geographic, subject, and numeric filing methods, along with database management principles. Upon completion, students should be able to set up and maintain effective information management systems.

### Credit Hours
3

## OST243 - Medical Office Simulation

### Overview

**Course Description**
This course introduces medical systems used to process information in the automated office. Topics include traditional and electronic information resources, managing health information, and the billing cycle. Upon completion, students should be able to use the computer accurately to schedule, bill, update, and make corrections.

### Credit Hours
3

## OST247 - Procedure Coding

### Overview

**Course Description**
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.

### Credit Hours
3

**Course Typically Offered**
Spring

### Requisites

**Simple Requisites**

**State prerequisite**

**Type**
Prerequisite

Take One: MED-121 or OST-141

Take MED-121 or OST-141(S24691);

## Student Learning Outcomes

**Objectives**
Demonstrate the use of computer-based applications for medical office

**Objectives**
Perform patient related activities within the Virtual Medical Office software simulation

**Objectives**
Explain the organization, format and content of CPT.

**Objectives**
Apply symbols, punctuation, and abbreviations unique to CPT and HCPCS Level II and incorporate clinical vocabularies and documentation

**Objectives**
Consult medical references and official coding manuals

**Objectives**
Interpret health care data to code and sequence procedures using procedure statements, case studies, and patient records

# OST248 - Diagnostic Coding

## Overview

**Course Description**
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.

## Credit Hours

3

**Course Typically Offered**
Spring

## Requisites

**Simple Requisites**

**State prerequisite**
**Type**
Prerequisite

Take One: MED-121 or OST-141

Take MED-121 or OST-141(S24691);

## Student Learning Outcomes

**Objectives**
Use coding manuals to assign CPT and HCPCS Level II codes

**Objectives**
Select the first-listed and principal procedures for provided documentation

**Objectives**
Explain the organization of the ICD-10-CM Tabular list of Diseases, Index to Diseases, and index to procedure and tabular list to procedures.

**Objectives**
Apply guidelines, symbols, punctuation, and abbreviations unique to ICD-10-CM and incorporate clinical vocabularies and documentation

**Objectives**
Consult medical references and official coding manuals

**Objectives**
Interpret health care data and apply inpatient/outpatient coding guidelines to code and sequence diagnoses and procedures using diagnosis/procedure statements, case studies, and patient records

# OST289 - Office Administration Capstone

## Overview

**Course Description**
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.

### Credit Hours
3

### Requisites
**Simple Requisites**

**State prerequisite**
**Type**
Prerequisite

Take OST-164

Take OST-164(S26558);

## PAD151 - Introduction to Public Administration

### Overview
**Course Description**
This course includes an overview of the role of the public administrator in government and an examination of the development and implementation of public policy. Topics include public personnel administration and management, decision making, public affairs, ethics, organizational theories, budgetary functions within governmental agencies, and other governmental issues. Upon completion, students should be able to explain the functions of government in society and in the lives of people composing that society.

### Credit Hours
3

**Course Typically Offered**
Fall, Spring

### Student Learning Outcomes

**Objectives**
Identify the responsibilities of the administrative professional for meetings and conferences.

**Objectives**
Explain how to process both incoming and outgoing mail.

**Objectives**
Describe public personnel administration and management.

**Objectives**
Explain decision making in public administration.

## PAD152 - Ethics in Government

### Overview
**Course Description**
This course introduces the ethical issues and problems within the public administration field. Emphasis is placed on building analytical skills, stimulating moral imagination, and recognizing the discretionary power of the administrator's role. Upon completion, students should be able to understand the moral dimensions of public administrative decision making.

### Credit Hours
3

## PAD251 - Public Finance & Budgeting

### Overview
**Course Description**
This course provides an overview of the public finance and budgeting processes used in the allocation of public resources to meet differing public interests. Topics include the political environment, government expenditures, revenues, taxation, budgetary process theories and techniques, and the relation of government finance to the economy. Upon completion, students should be able to recognize impacts of government revenue and expenditure policies and understand the role of budgeting in executing governmental policy.

### Credit Hours
3

## PAD252 - Public Policy Analysis

### Overview
**Course Description**
This course is a study of methods and techniques used to determine the effectiveness of public programs. Emphasis is placed on the concept of ecology and environmental impact, informal groups and information networks, and the relationship between public and private sectors. Upon completion, students should be able to analyze case studies with the use of political analysis techniques.

### Credit Hours
3

**Course Typically Offered**
Fall

## PAD254 - Grant Writing

### Overview
**Course Description**
This course covers the basic techniques of successful grant writing. Topics include concept development, funding sources research, and writing skills relevant to the grants process. Upon completion, students should be able to demonstrate a basic understanding of the grants process.

### Credit Hours
3

## PCI170 - DAQ and Control

### Overview
**Course Description**
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.

### Credit Hours
4

**Course Typically Offered**
Fall, Spring

### Student Learning Outcomes

**Objectives**
Explain the functions of government in society and in the lives of people composing that society.

**Objectives**
Discuss ethics in public administration.

**Objectives**
Identify the components of a data acquisition and control system

**Objectives**
Correctly choose and test analog-to-digital converters.

**Objectives**
Correctly choose and test digital-to-analog converters.

**Objectives**
Test and troubleshoot circuits using Analog Signal Conditioning

## PED110 - Fit and Well for Life

### Overview
**Course Description**
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.

### Credit Hours
2

**Course Typically Offered**
Fall, Spring, Summer

### Student Learning Outcomes

**Objectives**
Test and troubleshoot circuits using Digital Signal Conditioning

**Objectives**
Write source code in a graphics-based language to control devices and equipment interfaced to a PC

**Objectives**
Access, analyze and use current information related to a variety of health and wellness topics to create a personal fitness program

**Objectives**
Plan a personal, lifelong fitness program based on individual needs, abilities, and interests.

**Objectives**
Demonstrate knowledge and comprehension of basic concepts, theories and research as related to the topics listed in the syllabus.

## PED113 - Aerobics I

### Overview
**Course Description**
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.

### Credit Hours
1

**Course Typically Offered**
Spring

## Student Learning Outcomes

**Objectives**
Using various assessment procedures, identify personal health related behaviors to either change or initiate and maintain throughout the semester and beyond.

**Objectives**
Complete and commit to lifestyle behavior change.

**Objectives**
Develop their aerobic capacity and subsequently vastly improve their cardiovascular system

**Objectives**
Develop strength and flexibility to all muscle groups of the body which will enable the student to have a complete fitness conditioning and training program

**Objectives**
Develop agility, rhythm, coordination, good positioning, and a desire for movement expression

**Objectives**
Improve the fitness mind set in terms of motivation and goal setting

# PED117 - Weight Training I

## Overview

**Course Description**
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.

## Credit Hours

1

**Course Typically Offered**
Fall, Spring

## Student Learning Outcomes

**Objectives**
Improve stress management techniques

**Objectives**
Utilize weight management techniques

**Objectives**
Establish and implement a personal weight training program.

**Objectives**
Demonstrate knowledge and comprehension of basic weight training concepts.

# PED118 - Weight Training II

## Overview

**Course Description**
This course covers advanced levels of weight training. Emphasis is placed on meeting individual training goals and addressing weight training needs and interests. Upon completion, students should be able to establish and implement an individualized advanced weight training program.

## Credit Hours

1

**Course Typically Offered**
Fall, Spring, Summer

## Requisites

**Simple Requisites**

**State prerequisite**
**Type**
Prerequisite

Take PED-117

Take PED-117;

## Student Learning Outcomes

**Objectives**
Understand the importance of keeping an exercise journal.

**Objectives**
Improve muscular strength and muscular endurance.

**Objectives**
Establish and implement a personal circuit training

**Objectives**
Demonstrate knowledge and comprehension of basic weight training concepts.

## PED122 - Yoga I

### Overview

**Course Description**
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.

### Credit Hours

1

**Course Typically Offered**
Fall, Spring, Summer

### Student Learning Outcomes

**Objectives**
Understand and appreciate the benefits derived from cardiovascular activities.

**Objectives**
Maintain an exercise journal of walk/jog/run times.

**Objectives**
Improve concentration through a daily meditation/ yoga practice

## PED128 - Golf-Beginning

### Overview

**Course Description**
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.

### Credit Hours

1

### Student Learning Outcomes

**Objectives**
Apply life skill techniques to recognized challenges presented.

**Objectives**
Critique a martial arts class and give an oral presentation on such visit.

**Objectives**
Increase awareness of history, terminology, and basic strategies of golf

**Objectives**
Learn and develop skills such as the swings for the short and long game and putting

**Objectives**
Understand the rules and etiquette of golf.

**Objectives**
Incorporate basic skills in game situations

**Objectives**
Demonstrate safe warm up and flexibility

**Objectives**
Gain knowledge of basic drills to improve one's games

## PED130 - Tennis-Beginning

### Overview

**Course Description**
This course emphasizes the fundamentals of tennis. Topics include basic strokes, rules, etiquette, and court play. Upon completion, students should be able to play recreational tennis.

### Credit Hours

1

**Course Typically Offered**
Summer

### Student Learning Outcomes

**Objectives**
Play nine holes of either Par 3 golf or nine holes of regulation golf

**Objectives**
Perform the basic golf shots and demonstrate a knowledge of the rules and etiquette of golf.

**Objectives**
Understand the fundamentals of tennis.

**Objectives**
Demonstrate basic strokes, rules, etiquette, and court play.

**Objectives**
Be able to play recreational tennis.

**Objectives**
Discuss proper selection and use of equipment

## PED145 - Basketball-Beginning

### Overview

**Course Description**
This course covers the fundamentals of basketball. Emphasis is placed on skill development, knowledge of the rules, and basic game strategy. Upon completion, students should be able to participate in recreational basketball.

### Credit Hours

1

### Student Learning Outcomes

**Objectives**
Provide each student with information about how to get involved and play in amateur tournaments.

**Objectives**
Develop the student's fundamental skills and knowledge of indoor volleyball.

**Objectives**
Discuss the basic fundamentals of basketball.

## PED157 - Pickleball

### Overview

**Course Description**
This course covers the fundamentals of pickleball. Emphasis is placed on the basics of serving, ground strokes (drives, drops, dinks, punches, and lobs), overhead strokes (smashes and slams), and the rules and strategies of singles and doubles play. Upon completion, students should be able to apply these skills in pickleball playing situations.

### Credit Hours

1

**Course Typically Offered**
Fall

### Student Learning Outcomes

**Objectives**
Understand the history and ethics of flag football

**Objectives**
To use common sense and good judgment in regards to the safety of team members, opponents and self as well as exhibit responsible personal and social behavior that respects self and others

**Objectives**
Competently demonstrate various pickleball skills during practice and game play

**Objectives**
Obtain and understand basic pickleball rules in order to play competently at the recreation level

**Objectives**
Achieve and maintain a health enhancing level of physical fitness

# PED171 - Nature Hiking

## Overview

**Course Description**
This course provides instruction on how to equip and care for oneself on the trail. Topics include clothing, hygiene, trail ethics, and necessary equipment. Upon completion, students should be able to successfully participate in nature trail hikes.

## Credit Hours

1

**Course Typically Offered**
Fall, Summer

## Student Learning Outcomes

**Objectives**
Demonstrate basic pickleball strategies during game play

**Objectives**
Work well together with other students, regardless of skill level, during practice and game play

**Objectives**
Have knowledge of and demonstrate basic skills related to hiking preparation

**Objectives**
Have knowledge of and demonstrate appropriate clothing choices for various environments

**Objectives**
Have knowledge of and demonstrate knowledge of personal first aid kits

**Objectives**
Have knowledge of and demonstrate knowledge of weather considerations and their impact on the activity

# PED172 - Outdoor Living

## Overview

**Course Description**
This course is designed to acquaint the beginning camper with outdoor skills. Topics include camping techniques such as cooking and preserving food, safety, and setting up camp. Upon completion, students should be able to set up camp sites in field experiences using proper procedures.

## Credit Hours

2

**Course Typically Offered**
Spring

## Student Learning Outcomes

**Objectives**
Have knowledge of and demonstrate knowledge of leave no trace ethics.

**Objectives**
Have knowledge of and demonstrate awareness of the cardiovascular health benefits of hiking.

**Objectives**
demonstrate basic skills related to outdoor activities

**Objectives**
demonstrate appropriate clothing choices for various environments

**Objectives**
have knowledge of personal first aid kits

**Objectives**
demonstrate knowledge of weather considerations and their impact on the activity

# PED219 - Disc Golf

## Overview

**Course Description**
This course introduces the fundamentals of disc golf. Emphasis is placed on basic throwing techniques, putting, distance driving, scoring, and single and doubles play. Upon completion, students should be able to perform the skills required in playing situations.

## Credit Hours

1

**Course Typically Offered**
Fall

### Student Learning Outcomes

**Objectives**
Identify basic anatomy and physiology principles in regards to Pilates training.

**Objectives**
Increase flexibility, strength, coordination, endurance, and breath control

**Objectives**
Apply basic rules of disc golf

**Objectives**
Demonstrate physical conditioning for disc golf

**Objectives**
Demonstrate correct throws

## PHI210 - History of Philosophy

### Overview

**Course Description**
This course introduces fundamental philosophical issues through an historical perspective. Emphasis is placed on such figures as Plato, Aristotle, Lao-Tzu, Confucius, Augustine, Aquinas, Descartes, Locke, Kant, Wollstonecraft, Nietzsche, and Sartre. Upon completion, students should be able to identify and distinguish among the key positions of the philosophers studied.

### Credit Hours

3

### Requisites

**Simple Requisites**

**State prerequisite**
**Type**
Prerequisite

Take ENG-111

Take ENG-111(S13673);

### Student Learning Outcomes

**Objectives**
Participate in recreational basketball.

**Objectives**
Create basketball plays that address a motion offense, zone offense, press, press breaking, out of bounds underneath the basketball and sideline out of bounds scenarios

**Objectives**
Identify the major philosophers of different historical periods.

**Objectives**
Compare the positions of major philosophers and discuss how they influence thinking today.

**Objectives**
Draw analogies between the philosophical positions of the past and the 21st century.

**Objectives**
Differentiate between major schools of philosophy within and across historical periods.

## PHI215 - Philosophical Issues

### Overview

**Course Description**
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.

### Credit Hours

3

### Requisites

**Simple Requisites**

**State prerequisite**
**Type**
Prerequisite

Take ENG-111

Take ENG-111(S25433);

## PHI230 - Introduction to Logic

### Overview

**Course Description**
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.

### Credit Hours
3

### Requisites
**Simple Requisites**

**State prerequisite**
**Type**
Prerequisite

Take ENG-111

Take ENG-111(S13673);

## PHI240 - Introduction to Ethics

### Overview
**Course Description**
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.

### Credit Hours
3

**Course Typically Offered**
Fall, Spring, Summer

### Requisites
**Simple Requisites**

**State prerequisite**
**Type**
Prerequisite

Take ENG-111

Take ENG-111(S25433);

### Student Learning Outcomes

**Objectives**
Discuss, orally and in writing, philosophical issues.

**Objectives**
Defend a philosophical position as it relates to the contemporary world.

**Objectives**
Engage in critical thinking about moral issues.

**Objectives**
Identify, reconstruct and evaluate ethical arguments.

**Objectives**
Analyze key ethical concepts.

**Objectives**
Demonstrate understanding of major views in moral philosophy and how they relate to contemporary ethical and social issues.

**Objectives**
Identify methods used to test and evaluate possible ethical situations.

**Objectives**
Identify ethical theories in ancient and modern philosophy.

**Objectives**
Draw conclusions on such ethical situations as retributive justice, accountability, loyalty, confidentiality, and business.

**Objectives**
Differentiate between opinions on similar subjects held by people in responsible positions.

## PHY110 - Conceptual Physics

### Overview
**Course Description**
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.

### Credit Hours
3

**Course Typically Offered**
Fall, Spring, Summer

### Requisites
**Simple Requisites**

**Required concurrent or previous courses**
**Type**
Corequisite

Take PHY-110A

Take PHY-110A;

### Student Learning Outcomes

**Objectives**
Design a personal code of ethics that will help one react to questionable situations in the 21st century.

**Objectives**
Defend a personal code of ethics as it applies to the world situation today.

**Objectives**
Describe and apply core physical principles—including motion, forces, energy, heat, electricity, magnetism, and wave phenomena—to real-world situations using conceptually grounded reasoning and qualitative analysis.

**Objectives**
Explain the structure and behavior of matter and the universe through the lens of key scientific models, including atomic theory, thermodynamics, electromagnetism, and cosmology, using appropriate vocabulary and analogies for conceptual understanding.

## PHY110A - Conceptual Physics Lab

### Overview
**Course Description**
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.

### Credit Hours
1

**Course Typically Offered**
Fall, Spring, Summer

### Requisites
**Simple Requisites**

**State concurrent or previous courses**
**Type**
Corequisite

Take PHY-110

Take PHY-110;

### Student Learning Outcomes

**Objectives**
Use vector and graphical analysis to interpret physical quantities such as velocity, acceleration, force, and energy, and relate these to observable phenomena such as collisions, falling objects, circuits, and wave behavior.

**Objectives**
Resolve misconceptions about physical concepts and laws incuding scientific theory, motion, Newton's Laws, Momentum, Energy, Thermal Energy, Fluids, Electricity, Magnetism, Sound and Light.

**Objectives**
Experimentally verify core physical principles—including motion, forces, energy, heat, electricity, magnetism, and wave phenomena—to real-world situations using conceptually grounded reasoning and qualitative analysis.

## PHY121 - Applied Physics I

### Overview
**Course Description**
This algebra-based course introduces fundamental physical concepts as applied to industrial and service technology fields. Topics include systems of units, problem-solving methods, graphical analyses, vectors, motion, forces, Newton's laws of motion, work, energy, power, momentum, and properties of matter. Upon completion, students should be able to demonstrate an understanding of the principles studied as applied in industrial and service fields.

### Credit Hours
4

**Course Typically Offered**
Spring

## Student Learning Outcomes

**Objectives**
Demonstrate understanding of the scientific method and experimental techniques by collecting, analyzing, and interpreting basic physical data to support or refute physical hypotheses, using clearly documented measurement methods and units.

**Objectives**
Resolve misconceptions about physical concepts and laws incuding scientific theory, motion, Newton's Laws, Momentum, Energy, Thermal Energy, Fluids, Electricity, Magnetism, Sound and Light.

**Objectives**
Identify and describe the physical principles related to units and measurement, vectors, linear kinematics and dynamics, energy, power, momentum, fluid mechanics, and heat.

**Objectives**
Transfer and relate knowledge of the physical principles covered in this course (units and measurement, vectors, linear kinematics and dynamics, energy, power, momentum, fluid mechanics, and heat) to applications in industry.

**Objectives**
Analyze data collected during laboratory investigations

# PHY131 - Physics-Mechanics

## Overview

**Course Description**
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 Hours
4

**Course Typically Offered**
Summer

## Requisites

**Simple Requisites**

**State prerequisite**
**Type**
Prerequisite

Take One: MAT-121 or MAT-171

Take MAT-121(S23927) or MAT-171(S23934);

## Student Learning Outcomes

**Objectives**
Relate real world data collection and analyze the physical principles covered in this course (units and measurement, vectors, linear kinematics and dynamics, energy, power, momentum, fluid mechanics, and heat).

**Objectives**
Explain knowledge gained with previously-held misconceptions about the above concepts.

**Objectives**
Define and identify examples of the concepts underlying systems of units, problem-solving methods, graphical analysis, vectors, motion, forces, Newton's laws of motion, work, energy, power, momentum, and simple machines through the use of experimental techniques and data analysis.

**Objectives**
Develop mathematical models of physical phenomena related to motion, Newton’s Laws of Motion, Conservation of Energy, and Conservation of Momentum.

**Objectives**
Apply quantitative problem solving skills to solve problems related to systems of units, problem-solving methods, graphical analysis, vectors, motion, forces, Newton's laws of motion, work, energy, power, momentum, and simple machines.

**Objectives**
Define and explain concepts and vocabulary related to simple harmonic motion, waves, sound electrostatic forces, electric fields, electric potentials, magnetostatic forces, magnetic fields, electromagnetic induction, and light.

**Objectives**
Apply problem-solving strategies to solve problems related to simple harmonic motion, waves, sound electrostatic forces, electric fields, electric potentials, magnetostatic forces, magnetic fields, electromagnetic induction, and light.

# PHY133 - Physics-Sound & Light

## Overview

**Course Description**
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, wave motion, sound, light, and modern physics. Upon completion, students should be able to apply the principles studied to applications in engineering technology fields.

## Credit Hours

4

**Course Typically Offered**
Summer

## Requisites

**Simple Requisites**

**State prerequisite**
**Type**
Prerequisite

Take PHY-131

Take PHY-131(S13319);

## Student Learning Outcomes

**Objectives**
Draw free body diagrams illustrating forces acting on an object and utilize the diagram to correctly solve physics problems related to motion, forces and Newton's Laws of Motion.

**Objectives**
Relate the concepts underlying systems of units, problem-solving methods, graphical analysis, vectors, motion, forces, Newton's laws of motion, work, energy, power, momentum, and simple machines to everyday experiences.

# PHY151 - College Physics I

## Overview

**Course Description**
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.

## Credit Hours

4

**Course Typically Offered**
Fall, Spring

## Requisites

**Simple Requisites**

**State prerequisite**
**Type**
Prerequisite

Take One: MAT-171 or MAT-271

Take MAT-171(S25432) or MAT-271(S23939);

## Student Learning Outcomes

**Objectives**
Relate concepts learned about simple harmonic motion, waves, sound electrostatic forces, electric fields, electric potentials, magnetostatic forces, magnetic fields, electromagnetic induction, and light. theory to everyday examples.

**Objectives**
Predict, collect and analyze data through the use of basic laboratory procedures and graphical analysis techniques.

**Objectives**
Define and calculate quantities related to measurement, kinematics, vectors and the Laws of Motion.

**Objectives**
Relate the concepts underlying measurement and physics, kinematics, vectors and the Laws of motion to everyday experiences.

**Objectives**
Draw free body diagrams and apply Newton's Second Law of Motion to solve net force problems.

**Objectives**
Relate the concepts of conservation of momentum and energy to everyday events and calculate quantities using the Law of Conservation of Momentum and the Law of Conservation of Energy.

# PHY152 - College Physics II

## Overview

**Course Description**
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.

## Credit Hours

4

**Course Typically Offered**
Fall, Spring

## Requisites

**Simple Requisites**

**State prerequisite**
**Type**
Prerequisite

Take PHY-151

Take PHY-151(S16517);

## Student Learning Outcomes

**Objectives**
Draw free body diagrams and solveUniversal Gravitation, circular motion, rotational motion

**Objectives**
Collect and Analyze Data related to the concepts listed in previous student learning outcomes

**Objectives**
Define and explain concepts and vocabulary related to electrostatic forces, electric fields, electric potentials, direct-current circuits, magnetostatic forces, magnetic fields, electromagnetic induction, alternating-current circuits, and light.

**Objectives**
Apply problem-solving strategies to solve problems related to electrostatic forces, electric fields, electric potentials, direct-current circuits, magnetostatic forces, magnetic fields, electromagnetic induction, alternating-current circuits, and light.

# PHY251 - General Physics I

## Overview

**Course Description**
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.

## Credit Hours

4

## Requisites

**Simple Requisites**

**Local Corequisite**
**Type**

Corequisite

Take MAT-272

Take MAT-272(S23940);

**State prerequisite**
**Type**
Prerequisite

Take MAT-271

Take MAT-271(S26092);

# PHY252 - General Physics II

## Overview

**Course Description**
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.

## Credit Hours

4

**Course Typically Offered**
Spring, Summer

## Requisites

**Simple Requisites**

**State prerequisite**
**Type**
Prerequisite

Take All: MAT-272 and PHY-251

Take MAT-272(S13612) PHY-251(S12543);

## Student Learning Outcomes

**Objectives**
Relate this understanding to everyday events, machines, and observations

**Objectives**
Exhibit a practical understanding of the use of laboratory equipment to design and analyze any of the concepts above.

**Objectives**
Build simplified mathematical models representing complicated physical phenomena.

**Objectives**
Identify and demonstrate qualitative and quantitative understanding of all covered topics.

# PLU111 - Introduction to Basic Plumbing

## Overview

**Course Description**
This course introduces basic plumbing tools, materials, and fixtures. Topics include standard tools, materials, and fixtures used in basic plumbing systems and other related topics. Upon completion, students should be able to demonstrate an understanding of a basic plumbing system.

## Credit Hours

2

**Course Typically Offered**
Spring, Summer

## Student Learning Outcomes

**Objectives**
Relate this understanding to everyday events, machines, and observations

**Objectives**
Exhibit a practical understanding of the use of laboratory equipment to design and analyze any of the concepts above.

**Objectives**
Recognize and properly name basic tools, fittings, and pipes used in plumbing.

**Objectives**
Demonstrate basic safety practices in relation to plumbing.

# POL120 - American Government

## Overview

**Course Description**
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.

### Credit Hours
3

**Course Typically Offered**
Fall, Spring, Summer

### Student Learning Outcomes

**Objectives**
Explain the process of a plumbing system.

**Objectives**
Describe and demonstrate porper installation procedures for installing fixtures, water supply, and drainage for new residential construction.

**Objectives**
Demonstrate an understanding of the essential concepts and theories in the course materials.

**Objectives**
Illustrate an understanding of the roles, duties, and structural characteristics of the executive, legislative, and judicial branches in the US government.

**Objectives**
Analyze how American political institutions and individual behaviors interact to create political outcomes, with an awareness of the global context.

**Objectives**
Define the function of political parties, interest groups, public opinion, and the media.

**Objectives**
Interpret how American's political history, constitutional structure, and political culture contribute to the state of contemporary American democracy.

**Objectives**
Explain the origins and structure of American political institutions, as they reflect conflicting values of majoritarian rule and protection of minority rights;

**Objectives**
Identify the key individual and group actors in American national politics and the manner in which they attempt to influence public policy;

## POL130 - State & Local Government

### Overview

**Course Description**
This course includes state and local political institutions and practices in the context of American federalism. Emphasis is placed on procedural and policy differences as well as political issues in state, regional, and local governments of North Carolina. Upon completion, students should be able to identify and discuss various problems associated with intergovernmental politics and their effect on the community and the individual.

### Credit Hours
3

## POL210 - Comparative Government

### Overview

**Course Description**
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.

### Credit Hours
3

## POL220 - International Relations

### Overview

**Course Description**
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.

### Credit Hours
3

## PPA3120 - Automation Fundamentals

### Overview
**Course Description**
This course is designed for technical professionals seeking to learn the fundamental operations of company-specific Automation monitoring devices and equipment.

Through structured training and learning rotations, students will engage in hands-on sessions and in-depth tutorials to become proficient in the configuration, deployment, and optimization of HMI operator stations and telecontrol interfaces using protection schemes, numerical relays, and substation automation systems. Students will also learn the federal regulations to apply and test communication with IEC 61850 relays.

Upon completion, students will have a knowledge base of programming to select, install and monitor automation systems to ensure the safety and reliability of power distribution systems.

### Credit Hours
0

## PSY110 - Life Span Development

### Overview
**Course Description**
This course provides an introduction to the study of human growth and development. Emphasis is placed on 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 and apply this knowledge to their specific field of study.

### Credit Hours
3

## PSY115 - Stress Management

### Overview
**Course Description**
This course covers stressors and techniques for stress management. Topics include anger, assertiveness, adaptation to change, conflict, coping skills, identification of stressors, time management, and the physiology of stress and burnout. Upon completion, students should be able to demonstrate an understanding of the effective management of stress.

### Credit Hours
2

## PSY118 - Interpersonal Psychology

### Overview
**Course Description**
This course introduces the basic principles of psychology as they relate to personal and professional development. Emphasis is placed on personality traits, communication/leadership styles, effective problem solving, and cultural diversity as they apply to personal and work environments. Upon completion, students should be able to demonstrate an understanding of these principles of psychology as they apply to personal and professional development.

### Credit Hours
3

## PSY150 - General Psychology

### Overview
**Course Description**
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.

### Credit Hours
3

**Course Typically Offered**
Fall, Spring, Summer

### Student Learning Outcomes

**Objectives**
Identify the basic steps in the national legislative process, as well as formal and informal strategies/tools used by political leaders to achieve goals;

**Objectives**
Be familiar with Internet sources/tools for tracking national legislation, court proceedings, and other political information; be able to interpret and critically evaluate American national political events.

**Objectives**
Demonstrate a basic knowledge of the science of psychology.

**Objectives**
Explain the steps of the scientific method and identify the major types of research methods used in psychology.

**Objectives**
Describe the relationship between brain biology and behavior and, the general workings of the nervous system and regions of the brain.

**Objectives**
Summarize the main concepts of sensation and perception.

**Objectives**
Apply learning principles using the concepts of social learning theory, classical conditioning and operant conditioning.

**Objectives**
Analyze the developmental phases of the lifespan and the major theoretical perspectives associated with each.

# PSY234 - Organizational Psychology

## Overview

**Course Description**
This course introduces the field of industrial and organizational psychology. Topics include employee motivation, organizational structure, leadership, selection and training, conflict resolution, communication, job satisfaction, and other related influences on performance. Upon completion, students should be able to demonstrate a basic understanding of organizational dynamics and behaviors in the work place.

## Credit Hours

3

## Requisites

**Simple Requisites**

**State prerequisite**
**Type**
Prerequisite

Take PSY-150

Take PSY-150;

# PSY237 - Social Psychology

## Overview

**Course Description**
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.

## Credit Hours

3

**Course Typically Offered**
Fall

## Requisites

**Simple Requisites**

**State prerequisite**
**Type**
Prerequisite

Take One: PSY-150 or SOC-210

Take PSY-150 or SOC-210;

## Student Learning Outcomes

**Objectives**
Evaluate the major personality theorists and describe the details of each theory.

**Objectives**
Describe what a psychological disorder is; recognize the DSM-5 as a diagnostic tool and describe popular assessment instruments used in the psychological evaluation and treatment process.

**Objectives**
Define social psychology and related terms for introductory topics.

**Objectives**
Review the history of social psychology as a scientific inquiry.

**Objectives**
Discuss why individuals alter their behavior in social situations according to the influence of the group.

**Objectives**
Design a social psychology study that relates to real world problems, analyze the results and discuss solutions for the problem.

**Objectives**
Identify past and present social problems and discuss solutions for prejudice and discrimination, bystander effect, conformity, and obedience.

## PSY241 - Developmental Psychology

### Overview

**Course Description**
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.

### Credit Hours

3

**Course Typically Offered**
Fall, Spring, Summer

### Requisites

**Simple Requisites**

**State prerequisite**
**Type**
Prerequisite

Take PSY-150

Take PSY-150;

### Student Learning Outcomes

**Objectives**
Apply personal experience for major social psychology topics.

**Objectives**
Examine the causes and solutions for prejudice and discrimination.

**Objectives**
Define developmental theories.

**Objectives**
Identify developmental stages and milestones within each developmental category.

**Objectives**
Compare and contrast nature-based and nurture-based development.

## PSY246 - Adolescent Psychology

### Overview

**Course Description**
This course provides an overview of the behavior patterns, life changes, and social issues that accompany the developmental stage of adolescence. Topics include developmental theories; physical, cognitive and psychosocial growth; transitions to young adulthood; and sociocultural factors that influence adolescent roles in home, school and community. Upon completion, students should be able to identify typical and atypical adolescent behavior patterns as well as appropriate strategies for interacting with adolescents.

### Credit Hours

3

**Course Typically Offered**
Fall

### Requisites

**Simple Requisites**

**State prerequisite**
**Type**
Prerequisite

Take PSY-150

Take PSY-150;

### Student Learning Outcomes

**Objectives**
Cite different parenting styles and parenting skills

**Objectives**
Write a paper applying current developmental concepts to theoretical concepts.

**Objectives**
Demonstrate course navigation and tool usage skills essential to course material mastery

**Objectives**
Articulate the necessity of APA format in psychological research and demonstrate mastery of the use of this format.

**Objectives**
Define plagiarism and cite the problems associated with plagiarism.

**Objectives**
Identify the boundaries that define the period of adolescence.

**Objectives**
Define the fundamental biological, social and cognitive transitions that the adolescent encounters.

**Objectives**
Outline the major theories specific to identity formation in adolescence.

**Objectives**
Summarize the adolescent's role within the family system.

**Objectives**
Draw comparisons and specify differences about adolescent development across different cultural settings.

**Objectives**
Detect behaviors that suggest psychological difficulties in adolescence.

# PSY281 - Abnormal Psychology

## Overview

**Course Description**
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.

## Credit Hours

3

**Course Typically Offered**
Fall, Spring, Summer

## Requisites

**Simple Requisites**

**State prerequisite**
**Type**
Prerequisite

Take PSY-150

Take PSY-150;

## Student Learning Outcomes

**Objectives**
Appraise the role of work in adolescence

**Objectives**
Differentiate the different types of sexual issues faced by the adolescent. dependence.

**Objectives**
Define Abnormal Psychology

**Objectives**
Discuss the history of Abnormal Psychology

**Objectives**
Apply the major psychological theories to understanding human behavior

**Objectives**
List and explain the primary research methods

**Objectives**
Summarize the various mental disorders, and have an understanding of the basic symptoms, causes, and treatments of the disorders covered

**Objectives**
Describe Learning theories

**Objectives**
Understand the basis of human consciousness

**Objectives**
Identify major theories of personality development

**Objectives**
Compare and contrast the major categories of abnormal behavior

## Student Learning Outcomes

# PTA110 - Introduction to Physical Therapy

## Overview

**Course Description**
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.

## Credit Hours

3

**Course Typically Offered**
Fall

# PTA120 - Functional Anatomy

## Overview

**Course Description**
This course provides an organized study of anatomy and kinesiology. Emphasis is placed on the integration of structure and function of the skeletal, articular, muscular, nervous, and circulatory systems to include gait analysis. Upon completion, students should be able to describe the components and demonstrate function of these systems as applied to physical therapy.

## Credit Hours

3

**Course Typically Offered**
Spring

## Requisites

**Simple Requisites**

**State concurrent or previous courses**
**Type**
Corequisite

Take PTA-140

Take PTA-140;

**Objectives**
Analyze the integration of structure and function of the skeletal, articular, muscular, nervous, and circulatory systems to include gait analysis as it relates to the physical therapy profession on written exams.

Instructional Objectives:

1. Define commonly used anatomic and kinesiology terminology.
2. Identify the structures and functions of the skeletal, articular, muscular, nervous, and circulatory systems.
3. Analyze the planes of motion and axes of rotation for common motions.
4. Compare how force, torque, and levers affect biomechanical movement.
5. Identify common clinically-relevant periarticular soft tissues.
6. Distinguish between concentric, eccentric, and isometric activation of muscles and strengthening.
7. Recognize normal ranges of motion for the major joints of the axial and appendicular skeleton.
8. Distinguish between normal and abnormal ranges of motion for the major joints of the axial and appendicular skeleton.
9. Identify the effects of mobilization and immobilization on the connective tissues of a joint.
10. Cite the normal ranges of motion for each system joints.
11. Recognize the biomechanical components of respiration and chest wall movement.
12. Identify the phases of ventilation.
13. Recognize common misalignments of the joints and body regions.
14. Identify the components of the normal gait cycle, including spatial and temporal characteristics.
15. Outline the commonly encountered gait deviations and their causes.
16. Recognize common treatment interventions utilized for postural faults.
17. Recognize common postural faults in mock patients.
18. Differentiate the muscle groups responsible for the maintenance of normal function.
19. Compare the correlation between postural faults, muscle length imbalances, and muscle strength imbalances.
20. Design a treatment session, utilizing interventions from within the physical therapist's plan of care, for a mock patient with abnormal posture.
21. Identify the origin, insertion, action, and nerve innervation of each muscle.

**Objectives**
Perform skills and competence as it relates to functional anatomy components through demonstration of the skeletal, articular, muscular, nervous, and circulatory systems functions as applied to physical therapies on lab exams.

Instructional Objectives:

1. Demonstrate the ability to accurately palpate bony landmarks and muscles of the axial and appendicular skeleton.
2. Demonstrate the ability to competently assess posture in standing and sitting and the causes for abnormalities.
3. Demonstrate the ability to accurately locate, palpate, and label all functional anatomy components within this course.
4. Demonstrate the ability to accurately perform functional movements within each structure identified in this course.
5. Demonstrate and describe the common movements of the body and normal range of motion.

**Objectives**
Demonstrate professional skills for all aspects of the course.

Instructional Objectives:

1. Demonstrate appropriate professional behaviors and skills in all interactions with all stakeholders as noted through a passing course Professionalism grade.
2. Articulate the relevance of readings from professional journals to the practice of physical therapy.

# PTA130 - Physical Therapy Procedures I

## Overview

**Course Description**
This course includes concepts of injury and repair and documentation methods. Emphasis is placed on physiological effects, indications, contraindications, and skilled applications of selected therapeutic modalities. Upon completion, students should be able to safely, correctly, and effectively apply the emphasized techniques and procedures with understanding of correct documentation.

## Credit Hours

3

**Course Typically Offered**
Fall

## Requisites

**Simple Requisites**

**State concurrent or previous courses**
**Type**
Corequisite

Take PTA-110

Take PTA-110;

# PTA140 - Therapeutic Exercise

## Overview

**Course Description**
This course covers muscle physiology, exercise concepts, testing, and applications to the spine and extremities. Topics include strength, endurance, flexibility, and exercise protocols and progressions. Upon completion, students should be able to demonstrate skill in applying therapeutic exercise principles for non-neurological conditions in a safe and appropriate manner.

## Credit Hours

4

**Course Typically Offered**
Spring

## Requisites

**Simple Requisites**

**State concurrent or previous courses**
**Type**
Corequisite

Take PTA-120

Take PTA-120;

## Student Learning Outcomes

**Objectives**
Analyze the role of the physical therapist assistant in non-neurological conditions on written exams.

Instructional Objectives:
1. Identify the role of non-neurologic medicine in the US healthcare system.
2. Recognize the roles of different team members (patient/client, third-party payer, case manager, physical therapist, physical therapist assistant, physical therapy aide/ rehabilitation technician, occupational therapist, athletic trainer) in the team approach to health care.
3. Recognize the key concepts pertaining to the role of the physical therapist/physical therapist assistant team.
4. Identify the key concept of client/ patient education.

**Objectives**
Analyze the general concepts of therapeutic exercise through orthopedic management of foundational concepts, prevention, health, and wellness on written exams.

Instructional Objectives:

1. Define key terms of therapeutic exercise and components of physical function related to movement.
2. Recall the classification of health status, functioning, and disability with the evolution of models and related terminology in therapeutic exercise.
3. Outline the principles of comprehensive patient management.
4. Distinguish strategies for effective exercise and task-specific instruction.
5. Define key terms and concepts related to chronic disease, prevention, and health care.
6. Identify the role of physical therapy in health promotion and wellness through therapeutic exercise.
7. Outline the implications, considerations, and physical activity guidelines for developing prevention, health, and wellness programs.
8. Define common terminology associated with kinesiology and biomechanics.
9. Recognize terminology related to injuries within the musculoskeletal system.
10. Identify the planes and axes of motion, as well as the joint motions, which take place within each.
11. Identify the physical laws and principles related to movement and stability.
12. Recognize the concepts and components related to anatomical lever and torque production.

**Objectives**
Analyze the responses of tissues of the body to injury, repair, and aging on written exams.

Instructional Objectives:

1. Recall and outline the components of the four types of body tissues.
2. Identify the major properties of contractile and noncontractile tissue.
3. Define and recognize the inflammatory response to injury.
4. Apply the stress-strain curve to body tissues.
5. Identify the process and stages of tissue repair.
6. Recall the effects of prolonged immobilization on musculoskeletal tissue.
7. Categorize the severity of tissue injury.
8. Recall the healing responses of selected body tissues.
9. Summarize the effects of aging on selected body tissues.
10. Identify the benefits of exercise on aging tissues.
11. Identify the neurovascular healing and thromboembolic disease of tissue healing.

**Objectives**
Analyze the major principles of range of motion exercise, flexibility exercises, strengthening exercises, aerobic exercises, balance/coordination exercises, gait, aquatic exercises, and peripheral joint mobilizations on written exams.

Instructional Objectives:

1. Distinguish the different types of range of motion exercises (PROM, AAROM, and AROM).
2. Recognize optimal techniques for performing range of motion exercises.
3. Identify the indications, precautions, contraindications, and goals for the use of stretching and resistance exercises.
4. Differentiate among the interventions to increase the mobility of soft tissues.
5. Identify the parameters of stretching exercises.
6. Recall the rationale behind neuromuscular inhibition techniques.
7. Identify guidelines for the application of stretching procedure.
8. Differentiate between muscle strength, muscle endurance, and muscle power.
9. Recall the significance of the overload principle, specificity of exercise principle, and reversibility principle.
10. Recall the significance of different energy systems in the body.
11. Identify factors that affect tension generation of skeletal muscle.
12. Recall the parameters of resistance exercise and the physiologic adaptations associated.
13. Differentiate among the types of muscle contractions and types of resistance with resistance exercise and various regimens associated.
14. Identify the physiological response of the body, adaptive physiologic changes, and parameters of aerobic exercise.
15. Recognize the deconditioning effects associated with bedrest and immobility.
16. Identify the role of exercise testing as a basis for an exercise program.
17. Distinguish between balance and coordination.
18. Recall the role of the nervous system in the maintenance of balance.
19. Identify possible causes of impaired balance and its relation to falls risk.
20. Identify the significance of coordination and standardized tests to assess balance and risk for falls.
21. Define the various terms that are associated with peripheral joint

**Objectives**
Analyze the common pharmacology principles of non-neurological conditions on written exams.

Instructional Objectives:

1. Recall pharmacokinetic and pharmacodynamic concepts, basic principles, and safe medication use.
2. List the general principles of safe medication use and the role of the physical therapist assistant in optimizing patient safety.
3. Apply general principles of treatment and prevention of orthopedic infection.
4. Indicate the analgesics best suited for different types of pain.
5. Indicate how opioids work differently from anti-inflammatory analgesics in the treatment of pain.
6. Identify common side effects and precautions associated with opioids, acetaminophen, nonsteroidal anti-inflammatory drugs, cyclooxygenase-2 inhibitors, and corticosteroids.
7. Recall the risk of acetaminophen overdoses during pain management.
8. Examine commonly used medication in orthopedics.

**Objectives**
Analyze the management of patients/clients across the lifespan with pediatric, athletic, repetitive stress, rheumatic disorders, pain, pelvic floor, orthotics/prosthetics, and geriatric orthopedic conditions on written exams.

Instructional Objectives:

1. Determine safe and effective interventions for orthopedic injuries during the acute, subacute, and chronic phases of healing.
2. Determine safe and effective interventions for tissues that are chronically inflamed.
3. Determine safe and effective interventions for postoperative rehabilitation orthopedic surgeries.
4. Identify safe and effective interventions for specific pediatric, geriatric, athletic, repetitive stress, pelvic floor, and nonneurological conditions.
5. Recognize common exercises utilized for the treatment of vestibular disorders.
6. Identify common PNF patterns of the extremities and pelvis and common PNF interventions.

**Objectives**
Perform safe and effective range of motion exercises, flexibility exercises, strengthening exercises, aerobic exercises, and balance/coordination exercises on skills tests.

Instructional Objectives:

1. Perform safe and effective passive range of motion, active-assistive range of motion, active range of motion, and resistive exercises across the lifespan.
2. Perform safe and effective manual stretching, assisted-stretching, self-stretching, and stretching with neuromuscular inhibition exercises.
3. Perform safe and effective static and dynamic open-chain and closed-chain resistance exercises.
4. Perform safe and effective aerobic exercise training.
5. Perform safe and effective balance exercise training.
6. Document all physical therapy sessions through the writing of SOAP notes.
7. Demonstrate the ability to competently educate a simulated patient with an orthopedic condition on a home exercise program.

**Objectives**
Perform safe and effective data collection and interventions on practical exams.

Instructional Objectives:

1. Assess pain.
2. Assess skin integrity.
3. Assess edema through volumetric measurements.
4. Assess active and passive range of motion.
5. Assess muscle strength.
6. Assess functional abilities.
7. Assess the effectiveness of patient education/instruction.
8. Perform safe and effective passive range of motion, active-assistive range of motion, and active range of motion exercises.
9. Perform safe and effective manual stretching, assisted-stretching, self-stretching, and stretching with neuromuscular inhibition exercises.
10. Perform safe effective static and dynamic open-chain and closed-chain resistance exercises.
11. Perform safe and effective aerobic exercise training.
12. Perform safe and effective balance exercise training.
13. Demonstrate the ability to competently educate a simulated patient with an orthopedic condition on a home exercise program.
14. Document all physical therapy sessions through the writing of SOAP notes.

**Objectives**
Apply readings from professional literature to the practice of physical therapy during a student presentation.

Instructional Objectives:

1. Apply readings from peer-reviewed research journals to a clinical question.
2. Present conclusions to the class in a team presentation.

**Objectives**
Demonstrate professional skills for all aspects of the course.

Instructional Objectives:

1. Demonstrate appropriate professional behaviors and skills in all interactions with all stakeholders as noted through a passing course Professionalism grade.
2. Articulate the relevance of readings from professional journals to the practice of physical therapy.

# PTA150 - Physical Therapy Procedures II

## Overview

**Course Description**
This course is designed to include the theory and practice of additional therapeutic interventions. Topics include but are not limited to electrotherapy, burn and wound care, biofeedback, and selected data collection methods. Upon completion, students should be able to apply these modalities and treatment techniques effectively and safely and demonstrate knowledge of physiological principles involved.

## Credit Hours

3

**Course Typically Offered**
Spring

## Requisites

**Simple Requisites**

**State prerequisite**
**Type**
Prerequisite

Take PTA-130

Take PTA-130(S22179);

# PTA160 - Physical Therapy Procedures III

## Overview

**Course Description**
This course introduces treatment and measurement techniques and discusses treatment programs for selected neuromusculoskeletal dysfunction and injuries. Topics include soft tissue and joint dysfunction, selected assessment techniques, and various exercise programs. Upon completion, students should be able to demonstrate the application of selected data collection methods and functional interventions.

## Credit Hours

3

**Course Typically Offered**
Summer

## Requisites

**Simple Requisites**

**State prerequisite**
**Type**
Prerequisite

Take PTA-150

Take PTA-150(S22180);

# PTA170 - Pathophysiology

## Overview

**Course Description**
This course is a survey of basic pathology with emphasis on conditions most frequently observed and treated in physical therapy. Topics include etiology, pathology, manifestation, treatment, and prognosis. Upon completion, students should be able to explain repair processes, categorize diseases, define pathology, identify organ/body systems involved, and discuss treatment and prognosis.

## Credit Hours

3

**Course Typically Offered**
Fall

# PTA180 - PTA Clinical Ed Intro

## Overview

**Course Description**
This course introduces the physical therapy clinic in planned learning experiences and practice under supervision. Emphasis is placed on reinforcement of learned skills in direct patient care and communication. Upon completion, students should be able to demonstrate satisfactory performance in learned patient care skills, communication activities, and professional behaviors.

## Credit Hours

3

**Course Typically Offered**
Fall

# PTA212 - Health Care/Resources

## Overview

**Course Description**
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.

## Credit Hours

2

**Course Typically Offered**
Summer

# PTA222 - Professional Interactions

## Overview

**Course Description**
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.

## Credit Hours

2

**Course Typically Offered**
Summer

# PTA240 - Physical Therapy Procedures IV

## Overview

**Course Description**
This course covers normal development, adult and pediatric/CNS dysfunction, spinal cord injuries, amputee rehabilitation techniques, and cardiopulmonary rehabilitation. Topics include neurology review, selected rehabilitation techniques, ADL and functional training, prosthetic and orthotic training, and environmental access. Upon completion, students should be able to demonstrate safe and correct application of selected rehabilitation techniques for neurological dysfunction, cardiopulmonary conditions, and amputations.

## Credit Hours

5

**Course Typically Offered**
Fall

# PTA252 - Geriatrics for the PTA

## Overview

**Course Description**
This course is designed to provide more in-depth knowledge of physical therapy care for the geriatric individual. Topics include health promotion, wellness programs, and medical problems specific to the elderly. Upon completion, students should be able to discuss and describe special problems and programs for the elderly.

## Credit Hours

2

**Course Typically Offered**
Fall

# PTA254 - Pediatrics for the PTA

## Overview

**Course Description**
This course provides an in-depth study of pediatric dysfunction and rehabilitation techniques. Topics include severe and profound attention deficit disorder, sensory integration, and rehabilitation in the school setting. Upon completion, students should be able to discuss selected pediatric dysfunctions and demonstrate specialized rehabilitation techniques.

## Credit Hours

1

**Course Typically Offered**
Fall

# PTA260 - Adv. Pta Clinical Ed.

## Overview

**Course Description**
This course provides full-time clinical affiliations for planned learning experiences and practice under supervision. Emphasis is placed on reinforcement of learned skills in direct patient care, communications, and professional behaviors. Upon completion, students should be able to demonstrate satisfactory performance as an entry-level physical therapist assistant and as a member of the physical therapy team.

## Credit Hours

10

## Requisites

**Simple Requisites**

**State prerequisite**
**Type**
Prerequisite

Take One Set: Set 1: PTA-180 Set 2: PTA-182 and PTA-210

Take 1 group; # Take PTA-180; # Take PTA-182 PTA-210;

## Student Learning Outcomes

**Objectives**
Differentiate between the various physical agents that utilize deep heat as their therapeutic effect on a written exam.

Instructional Objectives:

1. Utilize APTA and state licensure documents to discuss appropriate practice of physical therapy.
2. Determine the physical effects of deep heating specifically with ultrasound.
3. Describe the effects of diathermy.
4. Compare and contrast thermal and nonthermal diathermy.

**Objectives**
Discuss electrotherapy and the various physiological effects for each type on a written exam.

Instructional Objectives:

1. Define electrical current and identify the different types.
2. Recall the effects of electrotherapy.
3. Compare and contrast the different techniques for electrotherapy.
4. Define neuromuscular electrical stimulation. (NMES).
5. Identify the physical effects of NMES.
6. Define transcutaneous electrical nerve stimulation.
7. Recall the physical effects of TENS.
8. Identify the effects of electrical currents on soft tissue.
9. Describe the physiological effects of EMG biofeedback.

**Objectives**
Discuss light therapy and the various physiological effects for each type on a written exam.

Instructional Objectives:

1. Define lasers, light, and photobiomodulation.
2. Define Ultraviolet (UV) radiation.
3. Recognize the physical effects of UV therapy.

**Objectives**
Describe hydrotherapy, the phases of wound healing, the role physical therapy plays on a healing wound and various interventions utilized to address these impairments on a written exam.

Instructional Objectives:

1. Compare the three phases of wound healing.
2. Differentiate primary, secondary, and tertiary intention healing.
3. Recognize local and systemic factors involved in wound healing.
4. Identify complications of inappropriate wound care or wound healing.
5. Recognize physical therapy treatment interventions for wound care.
6. Identify the various types of wound dressings, including their indications and precautions.
7. Recognize wound and wound risk assessment tools.
8. Define hydrotherapy and negative pressure wound therapy.
9. Define hydrotherapy and negative pressure wound therapy.
10. Describe the effects of hydrotherapy and negative pressure wound therapy.
11. Compare and contrast the different techniques for hydrotherapy (including aquatic therapy) and negative pressure wound therapy.

**Objectives**
List indications, precautions, contraindications, and desired physiological effects of various physical agents on a written exam.

Instructional Objectives:

1. Identify the clinical indications, contraindications, and precautions, desired physiological effects as well as the accurate documentation parameters for the following physical agents/modalities:
-Ultrasound (Direct, Immersion, Phonophoresis)
-Diathermy
-Electrotherapy Agents (TENS, NMES, IFC, Interferential, HiVolt, Russian, Combo, Iontophoresis, EMG)
-Electromagnetic Agents (Lasers, UV Light)
-Hydrotherapy (including wound management and aquatic therapy)

**Objectives**
Demonstrate competence and skilled application necessary for appropriately administering or verbalizing the administration of various physical agents or competency skills during a skills assessment.

Instructional Objectives:

1. Demonstrate the ability to accurately assess a wound, including wound size, depth, signs of infection, identification of viable and non-viable tissue, and exudate characteristics.
2. Demonstrate the ability to competently perform a sterile dressing change.
3. Demonstrate and safely perform or describe the safe application including set up and patient education of following physical agents/modalities:
-Ultrasound (Direct, Immersion, Phonophoresis)
-Diathermy
-Electrotherapy Agents (TENS, NMES, IFC, Interferential, HiVolt, Russian, Combo, Iontophoresis, EMG)
-Electromagnetic Agents (Lasers, UV Light)
-Hydrotherapy (including wound management and aquatic therapy)

**Objectives**
Demonstrate competence, safety and critical thinking and problem solving skills during lab practicals involving PT/PTA scenarios for physical therapy interventions utilizing various physical agents.

Instructional Objectives:

1. Design a treatment progression within a PT POC utilizing aquatic therapy and describe the communication that is necessary to the supervising PT regarding progress toward STG and LTG and expected functional outcomes as well as to a referring provider regarding rationale for aquatic therapy.
2. Design a treatment progression within a PT POC utilizing an electrotherapy agent that would aid in pain control and discuss how you would educate your patient regarding the use of this agent.
3. Design a treatment progression within a PT POC utilizing an electrotherapy agent that would assist in soft tissue healing and discuss how you would educate your patient regarding the use of this agent.
4. Design a treatment progression within a PT POC utilizing a deep heating agent that would promote tissue healing and discuss how you would educate your patient regarding the use of this agent.

**Objectives**
Demonstrate professional skills for all aspects of the course.

Instructional Objectives:

1. Demonstrate appropriate professional behaviors and skills in all interactions with all stakeholders as noted through a passing course Professionalism grade.
2. Articulate the relevance of readings from professional journals to the practice of physical therapy.

# PTA260AB - Adv. Pta Clinical Ed.

## Overview

**Course Description**
This course provides full-time clinical affiliations for planned learning experiences and practice under supervision. Emphasis is placed on reinforcement of learned skills in direct patient care, communications, and professional behaviors. Upon

completion, students should be able to demonstrate satisfactory performance as an entry-level physical therapist assistant and as a member of the physical therapy team.

## Credit Hours

5

## Requisites

**Simple Requisites**

**State prerequisite**
**Type**
Prerequisite

Take One Set: Set 1: PTA-180 Set 2: PTA-182 and PTA-210

Take 1 group; # Take PTA-180; # Take PTA-182 PTA-210;

## Student Learning Outcomes

**Objectives**
Upon completion of the course, the student will be marked at “Entry Level Performance” on each element of the Clinical Performance Instrument (CPI) tool during this course or prior clinical education experiences.

Instructional Objectives:

1. Utilize APTA and state licensure documents to discuss appropriate practice of physical therapy.
2. Demonstrate the capability to independently apply all PTA learned skills and knowledge by consistently and safely performing effective and competent physical therapy assessment skills and treatment interventions from the physical therapist’s plan of care for routine and complex patients while under the direction and supervision of the physical therapist
3. Demonstrate the capability to independently provide timely and relevant documentation and communication to the physical therapist regarding all aspects of patient status, patient treatment and patient response to treatment.
4. Demonstrate the capability to independently provide effective education to patients, family members/caregivers, and other health care providers.
5. Demonstrate the capability to independently perform patient communication, in a culturally competent manner.
6. Demonstrate the ability to perform administrative procedures of the clinic, including billing, insurance requirements and performance improvement activities, with guidance for new or unusual situations.
7. Recognize administrative roles and duties through attendance at departmental meetings, committee meetings, and case conferences with other healthcare providers as appropriate.
8. Consistently and independently demonstrate appropriate legal and ethical behavior during skill performance and interactions with patients, family members, and other healthcare providers.
9. Consistently demonstrate entry level Professional Behaviors in all interactions with patients, family members/caregivers, physical therapy personnel, and other health care providers by displaying all Professional Behaviors at entry level (Student Self-Assessment) and Faculty Professional Behaviors Assessment).
10. Design and provide an in-service to

**Objectives**
Demonstrate professional skills for all aspects of the course.

Instructional Objectives:

1. Demonstrate appropriate professional behaviors and skills in all interactions with all stakeholders as noted through a passing course Professionalism grade.
2. Articulate the relevance of readings from professional journals to the practice of physical therapy.

# PTA260BB - Adv. Pta Clinical Ed.

## Overview

**Course Description**
This course provides full-time clinical affiliations for planned learning experiences and practice under supervision. Emphasis is placed on reinforcement of learned skills in direct patient care, communications, and professional behaviors. Upon completion, students should be able to demonstrate satisfactory performance as an entry-level physical therapist assistant and as a member of the physical therapy team.

## Credit Hours

5

## Requisites

**Simple Requisites**

**Required concurrent or previous courses**
**Type**
Corequisite

Take PTA-260AB

Take PTA-260AB(L58147);

**State prerequisite**
**Type**
Prerequisite

Take One Set: Set 1: PTA-180 Set 2: PTA-182 and PTA-210

Take 1 group; # Take PTA-180; # Take PTA-182 PTA-210;

## Student Learning Outcomes

**Objectives**
Upon completion of the course, the student will be marked at "Entry Level Performance" on each element of the Clinical Performance Instrument (CPI) tool during this course or prior clinical education experiences.

Instructional Objectives:

1. Utilize APTA and state licensure documents to discuss appropriate practice of physical therapy.
2. Demonstrate the capability to independently apply all PTA learned skills and knowledge by consistently and safely performing effective and competent physical therapy assessment skills and treatment interventions from the physical therapist's plan of care for routine and complex patients while under the direction and supervision of the physical therapist
3. Demonstrate the capability to independently provide timely and relevant documentation and communication to the physical therapist regarding all aspects of patient status, patient treatment and patient response to treatment.
4. Demonstrate the capability to independently provide effective education to patients, family members/caregivers, and other health care providers.
5. Demonstrate the capability to independently perform patient communication, in a culturally competent manner.
6. Demonstrate the ability to perform administrative procedures of the clinic, including billing, insurance requirements and performance improvement activities, with guidance for new or unusual situations.
7. Recognize administrative roles and duties through attendance at departmental meetings, committee meetings, and case conferences with other healthcare providers as appropriate.
8. Consistently and independently demonstrate appropriate legal and ethical behavior during skill performance and interactions with patients, family members, and other healthcare providers.
9. Consistently demonstrate entry level Professional Behaviors in all interactions with patients, family members/caregivers, physical therapy personnel, and other health care providers by displaying all Professional Behaviors at entry level (Student Self-Assessment) and Faculty Professional Behaviors Assessment).
10. Design and provide an in-service to

**Objectives**
Demonstrate professional skills for all aspects of the course.

Instructional Objectives:

1. Demonstrate appropriate professional behaviors and skills in all interactions with all stakeholders as noted through a passing course Professionalism grade.
2. Articulate the relevance of readings from professional journals to the practice of physical therapy.

# PTA270 - PTA Topics

## Overview

**Course Description**
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.

## Credit Hours

1

**Course Typically Offered**
Fall

# PTC110 - Industrial Environment

## Overview

**Course Description**
This course introduces the pharmaceutical industry, including a broad overview of work in this field. Emphasis is placed on good manufacturing practices (GMP), work conduct, company organization, job expectations, personal safety, hygiene, and company rules and regulations. Upon completion, students should be able to follow good manufacturing practice regulations and inspect a pharmaceutical manufacturing facility for compliance with GMP.

## Credit Hours

3

**Course Typically Offered**
Fall, Spring

## Requisites

**Simple Requisites**

**Local**
**Type**
Corequisite

BPM-110

Take BPM-110(S20448);

## Student Learning Outcomes

**Objectives**
Demonstrate an understanding of quality systems such as International Standards Organization (ISO) and Current Good Manufacturing Practices (cGMP).

**Objectives**
Identify workplace safety hazards.

**Objectives**
Understand upstream and downstream bioprocess operations like separation methods including evaporation, distillation, precipitation, crystallization, filtration, liquid extraction and chromatography.

# PTC228 - Pharmaceutical Issues

## Overview

**Course Description**
This course provides a forum for discussion of current pharmaceutical topics. Emphasis is placed on events, news, regulations, and technology in pharmaceutical manufacturing. Upon completion, students should be able to demonstrate an understanding of the dynamic nature of the pharmaceutical industry.

## Credit Hours

1

**Course Typically Offered**
Fall, Spring

## Student Learning Outcomes

**Objectives**
Apply and interview with confidence for an entry-level process technician job at a North Carolina pharmaceutical or biotechnology company.

**Objectives**
Discuss current pharmaceutical topics.

**Objectives**
Interpret emerging events, news, regulations, and technology in pharmaceutical manufacturing.

# PTE116 - Pathway to Employment - Biological and Chemical

## Overview

**Course Description**
This course introduces fundamental employment core skillsets required to effectively enter the biological and chemical workforce and/or a registered apprenticeship and may also serve as a component of a pre-apprenticeship.

Topics include workplace safety, communication skills, industry overview, tools and equipment, computation and financial literacy, materials, employability skills, personal health, career exploration and pathways including apprenticeship, job preparation and required job skills, and site visits.

Upon completion, students should be able to explain how to locate and engage employers, present themselves in a professional manner, perform basic on-the-job skills, pursue necessary job-specific training and/or certification, and enter a biological and chemical career with the knowledge required to be successfully employed.

## Credit Hours

3

# REL110 - World Religions

## Overview

**Course Description**
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.

## Credit Hours

3

**Course Typically Offered**
Fall, Spring

## Student Learning Outcomes

**Objectives**
Identify basic on-the-job skills.

**Objectives**
Identify the world's major religions and describe their geography, origins, development, major tenets, and key words.

**Objectives**
Compare the references to the god or gods in the various religions and how they are revealed to people.

**Objectives**
Explain how ancient religious practices affect modern life and the social strain of the people involved.

**Objectives**
Trace the means by which followers of each religion attain a better life than without the religion and how these means are similar in various religions.

**Objectives**
Draw a comparative chart relative to the era in which each religion flourished.

# REL211 - Introduction to Old Testament

## Overview

**Course Description**
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.

## Credit Hours

3

**Course Typically Offered**
Fall, Spring

## Student Learning Outcomes

**Objectives**
Determine the political and social role played by these religions and their relationship to the political scene today, especially in the Middle East.

**Objectives**
Distinguish Old Testament literature and the Hebraic literary style.

**Objectives**
Explain historical and cultural forces that help explain the Old Testament.

**Objectives**
Explain customs and ways of thinking characteristic of the Ancient World.

# REL212 - Introduction to New Testament

## Overview

**Course Description**
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.

## Credit Hours

3

**Course Typically Offered**
Spring

## Student Learning Outcomes

**Objectives**
Compare the social, political, and religious context of ancient Israel and today's Middle East.

**Objectives**
Discuss the historical and cultural settings relative to understanding the New Testament.

**Objectives**
Compare the social, political, and religious context of the ancient world and today's world.

**Objectives**
Describe the customs and thinking of the ancient world.

# SAB110 - Intro to Addiction & Recovery Studies

## Overview

**Course Description**
This course provides an overview of the core concepts in addiction and recovery. Topics include the history of substance use, effects on society members, treatment of addiction, and preventive measures. Upon completion, students should be able to demonstrate knowledge of the origins of substance use, addiction, prevention, treatment, and recovery.

## Credit Hours

3

**Course Typically Offered**
Fall, Spring

## Student Learning Outcomes

**Objectives**
Appraise an understanding of the relationship between the world of ancient Israel and the Middle East today.

**Objectives**
Define Substance Use Disorders

**Objectives**
Understand the numbers of substance use and the clients who use.

**Objectives**
Define co-occurring disorders with Substance use

**Objectives**
Use and classify per the DSM-5

**Objectives**
Discuss treatment options, local and national.

# SAB120 - Intake and Assessment

## Overview

**Course Description**
This course covers processes for rapport building and procedures used to identify and evaluate individuals' strengths and weaknesses. Topics include diagnostic evaluation and placement, effective interviewing and communication techniques, and use of assessment tools. Upon completion, students should be able to establish rapport with individuals, recognize disorders, and obtain information for referrals and placement.

## Credit Hours

3

**Course Typically Offered**
Spring

## Student Learning Outcomes

**Objectives**
Identify the steps towards a certification and/or licensure

**Objectives**
Articulate important issues and trends in substance abuse.

**Objectives**
Discuss legal and ethical issues in substance abuse

**Objectives**
Understand client and counselor verbal and non-verbal communication

**Objectives**
Discuss crisis intervention, resistance, strengths, and weakness.

## SAB135 - Addictive Process

### Overview

**Course Description**
This course covers the physical, emotional, psychological, and cultural aspects of the addictive process. Emphasis is placed on disorders related to addictions to alcohol, drugs, food, sex, work, gambling, internet, and relationships. Upon completion, students should be able to identify the effects, prevention strategies, and treatment methods associated with addictive disorders.

### Credit Hours

3

**Course Typically Offered**
Fall

### Student Learning Outcomes

**Objectives**
Learn a systematic approach to care

**Objectives**
Define Addictive Process and its implications on substance use disorders

**Objectives**
Discover biological processes related to addictive process

**Objectives**
Discuss emotional processes related to addictive process

**Objectives**
Learn mental and environmental processes related to addictive process

## SAB210 - Addiction & Recovery Counseling

### Overview

**Course Description**
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.

### Credit Hours

3

**Course Typically Offered**
Fall

### Student Learning Outcomes

**Objectives**
Explore each division of Pharmacology and its purpose.

**Objectives**
Demonstrate basic substance abuse counseling skills.

**Objectives**
Understand the major approaches to psychotherapy and counseling

**Objectives**
Research and explore the DSM-5

**Objectives**
Demonstrate basic counseling techniques

**Objectives**
Understand the role of the counselor.

**Objectives**
Explore basic counseling terminology, techniques, and skills

# SAB240 - Diversity, Ethics, & Trends in Addiction & Recovery

## Overview

**Course Description**
This course introduces systems of diversity, ethics, and trends in addiction and recovery. Topics include confidentiality, assessment of personal values, professional responsibilities, competencies, and ethics relative to multicultural service provision. Upon completion, students should be able to apply and discuss multiple diversity and ethical scenarios applicable to addiction and recovery services.

## Credit Hours

3

**Course Typically Offered**
Spring

## Student Learning Outcomes

**Objectives**
Discuss basic ethics and confidentiality

**Objectives**
Articulate important issues and trends in substance abuse.

**Objectives**
Discuss legal and ethical issues in substance abuse

**Objectives**
Understand current trends and news

**Objectives**
Understand the professionals' standards, values, and competences

# SEC110 - Security Concepts

## Overview

**Course Description**
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.

## Credit Hours

3

# SEC150 - Secure Communications

## Overview

**Course Description**
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.

## Credit Hours

3

**Course Typically Offered**
Spring

# SEC160 - Security Administration I

## Overview

**Course Description**
This course provides an overview of security administration with an emphasis on designing secure network architectures. Topics include networking technologies, TCP/IP fundamentals, network protocols, traffic analysis, monitoring strategies, and established security best practices. Upon completion, students should be able to use advanced network analysis tools to monitor network traffic and develop security measures to safeguard against various threats.

## Credit Hours

3

# SEC175 - Perimeter Defense

## Overview

**Course Description**
This course introduces the principles of securing networks using routers and firewalls. Topics include networking protocols, threat mitigation, firewall configuration, authentication, authorization, intrusion detection, encryption, IPSec, VPNs, and remote access technologies. Upon completion, students should be able to secure internal networks using router and firewall technologies.

## Credit Hours

3

**Course Typically Offered**
Spring

## Student Learning Outcomes

**Objectives**
Be prepared to take the Cisco Certified CyberOps Certification exam.

**Objectives**
Define the roles performed by major threat actors in modern cyberattacks and their primary motivations.

**Objectives**
Evaluate various cyberattack types and attack techniques.

**Objectives**
Explain how DDOS, WiFi exploits, and Advanced Threat actions are used to perform cyberattacks.

**Objectives**
Distinguish between compliance and security.

**Objectives**
Describe the basic fundamentals of perimeter-based and Zero Trust network security models.

**Objectives**
Explain how virtualized data center security differs from physical data center security.

**Objectives**
Discuss Cloud Computing Security and how it impacts organizational networks.

**Objectives**
Compare various network security devices including firewalls, VPNs and more.

**Objectives**
Describe interconnected technology in daily communication and lifestyle and systems that need protection.

**Objectives**
Examine cybersecurity landscape environments, attack threat vectors, exposure, vulnerabilities, and risk factors

**Objectives**
Identify physical, logical, and virtual addressing that accommodates various sized networks through the use of subnet mask schemes.

**Objectives**
Explain the TCP/IP Model and correctly identify the functions of the specific layers including packet encapsulation and lifecycle.

**Objectives**
Accurately explain common use of cloud, virtualization, storage, backup, and recovery procedures.

**Objectives**
Demonstrate the skills necessary to plan, design, implement, troubleshoot, and maintain network infrastructure environments.

**Objectives**
Formulate an industry-standard design to protect infrastructure against cybersecurity threats

**Objectives**
Apply advanced filtering methodologies such as user, application, and content ID to protect against all known and unknown attack vectors

**Objectives**
Describe the basics of cryptography including synchronous/asynchronous encryption, PKI, and certificates

**Objectives**
Demonstrate the ability to assess and harden endpoints based on security policies

**Objectives**
Describe the uses of advanced malware research and analysis as they provide enhanced protection for enterprise networks

## SEC210 - Intrusion Detection

### Overview

**Course Description**
This course introduces the student to intrusion detection methods in use today. Topics include the types of intrusion detection products, traffic analysis, and planning and placement of intrusion detection solutions. Upon completion, students should be able to plan and implement intrusion detection solution for networks and host-based systems.

### Credit Hours
3

**Course Typically Offered**
Spring

## SOC210 - Introduction to Sociology

### Overview
**Course Description**
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.

### Credit Hours
3

**Course Typically Offered**
Fall, Spring, Summer

### Student Learning Outcomes

**Objectives**
Examine mobile and cloud-based connection technologies

**Objectives**
identify the major components of culture

**Objectives**
compare and contrast the major theories in sociology

**Objectives**
understand the socialization process and identify the major agents of socialization

**Objectives**
differentiate between types of social groups and organizations

**Objectives**
describe the concept of deviance and social control

**Objectives**
discuss different aspects of social stratification including race, ethnicity, sex, and gender

## SOC213 - Sociology of the Family

### Overview
**Course Description**
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.

### Credit Hours
3

**Course Typically Offered**
Fall

### Student Learning Outcomes

**Objectives**
identify major sociological institutions such as family, education, religion, and health

**Objectives**
Correct the myths about family and marriage in the United States.

**Objectives**
Analyze his or her own family experiences and better understand his or her place within the family.

**Objectives**
Explain how basic sociological concepts and principles are applied in family sociology and how they are manifested in family experiences.

**Objectives**
Examine relationships, including those social relationships that lead to marriage.

**Objectives**
Analyze different family lifestyles and variations in family structure.

**Objectives**
Examine many of the dynamics inherent in marriage and/or family life, i.e. communications, gender expectations, and violence.

**Objectives**
Examine elements of parenthood and parenting styles.

**Objectives**
Discuss issues related to divorce and remarriage.

## SOC215 - Group Processes

### Overview

**Course Description**
This course introduces group processes and dynamics. Emphasis is placed on small group experiences, roles and relationships within groups, communication, cooperation and conflict resolution, and managing diversity within and among groups. Upon completion, students should be able to demonstrate the knowledge and skills essential to analyze group interaction and to work effectively in a group context.

### Credit Hours

3

## SOC220 - Social Problems

### Overview

**Course Description**
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.

### Credit Hours

3

**Course Typically Offered**
Fall, Spring

### Student Learning Outcomes

**Objectives**
Trace how the variables of race, class, and gender have influenced family patterns from past to present.

**Objectives**
Define the nature of sociology as a discipline;

**Objectives**
Define and discuss the major theoretical perspectives in sociology;

**Objectives**
Compare and contrast the tools that sociologists use in conducting research;

**Objectives**
Outline culture, including cultural norms, values, and other cultural content;

**Objectives**
Identify the elements of the social structure;

**Objectives**
Explain the relationship between the individual and society, including the study of social interaction and socialization;

**Objectives**
Discuss the various dimensions of social inequality;

## SOC225 - Social Diversity

### Overview

**Course Description**
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.

### Credit Hours

3

**Course Typically Offered**
Fall, Spring

### Student Learning Outcomes

**Objectives**
Highlight some of the dominant institutions of society.

**Objectives**
Define, explain, and apply sociological concepts and theories utilized in the curricula of Social Diversity

**Objectives**
Identify and discuss how members of marginalized groups in the United States interact with members of the dominant group and how each perceives the other.

**Objectives**
Define and distinguish between prejudice, race, discrimination, and stereotypes

**Objectives**
Compare and contrast the different experiences of various ethnic groups in the U.S.

**Objectives**
Identify the effect social class has on individuals

**Objectives**
Identify and explain the stratification of gender in major American institutions

**Objectives**
Discuss societal reactions and effects of cultural reactions to transgenderism, homosexuality, and gender identity

## SOC230 - Race and Ethnic Relations

### Overview

**Course Description**
This course includes an examination of the various aspects of race and ethnicity and how these lead to different experiences, opportunities, problems, and contributions. Topics include prejudice, discrimination, perceptions, myths, stereotypes, and intergroup relationships. Upon completion, students should be able to identify and analyze relationships among racial and ethnic groups within the larger society.

### Credit Hours

3

## SOC232 - Social Context of Aging

### Overview

**Course Description**
This course provides an overview of the social implications of the aging process. Emphasis is placed on the roles of older adults within families, work and economics, politics, religion, education, and health care. Upon completion, students should be able to identify and analyze changing perceptions, diverse lifestyles, and social and cultural realities of older adults.

### Credit Hours

3

**Course Typically Offered**
Spring

### Student Learning Outcomes

**Objectives**
Identify and discuss historical and contemporary issues in education and religion

**Objectives**
Identify the characteristics and demographics of the elderly population

**Objectives**
Construct social chart of the elderly and their relationships with others

**Objectives**
Calculate the effects of the law, discriminatory practices, employability, victimization and abuse, on the elderly's quality of life

**Objectives**
Report on a case study of an aging individual and demonstrate how they are or are not disengaging from society

**Objectives**
Write a case history of someone over 60 and employ the theories of aging as discussed in class

## SOC240 - Social Psychology

### Overview

**Course Description**
This course examines the influence of culture and social groups on individual behavior and personality. Emphasis is placed on the process of socialization, communication, conformity, deviance, interpersonal attraction, intimacy, race and ethnicity, small group experiences, and social movements. Upon completion, students should be able to identify and analyze cultural and social forces that influence the individual in a society.

### Credit Hours

3

**Course Typically Offered**
Fall, Spring, Summer

### Student Learning Outcomes

**Objectives**
Appraise the value of some major social programs for the aging population

**Objectives**
Define social psychology

**Objectives**
Describe the nature of attitudes

**Objectives**
Explain the concept of persuasion

**Objectives**
Summarize the complexity of prejudice and discrimination

**Objectives**
Identify factors involved in social influence

**Objectives**
Discuss the nature of group behavior

**Objectives**
Understand the basis of attraction and intimate relationships

## SON110 - Introduction to Sonography

### Overview

**Course Description**
This course provides an introduction to medical sonography. Topics include applications, sonographic terminology, history, patient care, ethics, and basic skills. Upon completion, students should be able to define professionalism and sonographic applications and perform basic patient care skills and preliminary scanning techniques.

### Credit Hours

3

**Course Typically Offered**
Fall

### Student Learning Outcomes

**Objectives**
Explain the concepts of aggression and prosocial behavior

**Objectives**
Demonstrate the ability to think critically in lab and clinical situations

**Objectives**
Communicate professionally with classmates, instructors, preceptors, and clinic staff at all times

**Objectives**
Use appropriate medical terminology in class, lab, and clinical settings

**Objectives**
Identify the clinical responsibilities of the sonographer

**Objectives**
Display proper ergonomics and body mechanics when using sonography equipment

**Objectives**
Understand diagnostic ultrasound clinical practice standards

**Objectives**
Actively practice HIPAA measures and patient confidentiality at all times

**Objectives**
Demonstrate appropriate directional terminology and patient positioning

**Objectives**
Display competent use of transducers, B-mode and basic doppler, and essential universal knobology

**Objectives**
Demonstrate patient assessment and the 10-step Sonographic examination

**Objectives**
Identify the role of the sonographer in emergency situations

**Objectives**
Apply appropriate infection control and sterile procedure processes

## SON111 - Sonographic Physics

### Overview

**Course Description**
This course introduces ultrasound physical principles, bioeffects, and sonographic instrumentation. Topics include sound wave mechanics, transducers, sonographic equipment, Doppler physics, bioeffects, and safety. Upon completion, students should be able to demonstrate knowledge of sound wave mechanics, transducers, sonography equipment, the Doppler effect, bioeffects, and safety.

### Credit Hours

4

**Course Typically Offered**
Fall, Spring

### Student Learning Outcomes

**Objectives**
Explain the concept of ALARA

**Objectives**
Describe the interaction of sound and soft tissues

**Objectives**
Explain sound production and propagation.

**Objectives**
Summarize the basic principles and techniques of ultrasound production.

**Objectives**
Explain the operation of annular, phased, and linear transducers.

**Objectives**
Discuss and draw sound beam profiles, explaining beam focusing techniques.

**Objectives**
Explain the basic functions of image creation and storage.

**Objectives**
Identify basic technical controls and their actions on the ultrasound image.

## SON120 - Sonography Clinical Education I

### Overview

**Course Description**
This course provides active participation in clinical sonography. Emphasis is placed on imaging, processing, and technically evaluating sonographic examinations. Upon completion, students should be able to image, process, and evaluate sonographic examinations.

### Credit Hours

5

**Course Typically Offered**
Spring

### Requisites

**Simple Requisites**

**State prerequisite**
**Type**
Prerequisite

Take SON-110

Take SON-110;

## Student Learning Outcomes

**Objectives**
Integrate previous knowledge of anatomy and physiology to examine the cross-sectional anatomy of the abdominal viscera.

**Objectives**
Implement the principles of scanning techniques in examining the abdominal viscera.

**Objectives**
Integrate previous knowledge of anatomy and physiology to sonographically identify normal anatomy and the physiology of the abdominal viscera.

**Objectives**
Discuss the laboratory testing associated with the abdominal viscera.

**Objectives**
Explain and document the preparation that should precede a sonographic examination of the abdominal viscera.

**Objectives**
Perform basic abdominal imaging views using examination equipment and techniques.

# SON121 - Sonography Clinical Education II

## Overview

**Course Description**
This course provides continued active participation in clinical sonography. Emphasis is placed on imaging, processing, and technically evaluating sonographic examinations. Upon completion, students should be able to image, process, and evaluate sonographic examinations.

## Credit Hours

5

**Course Typically Offered**
Summer

## Requisites

**Simple Requisites**

**State prerequisite**

**Type**
Prerequisite

Take SON-120

Take SON-120;

## Student Learning Outcomes

**Objectives**
Identify beneficial and detrimental image artifacts.

**Objectives**
Integrate previous knowledge of anatomy and physiology to examine the cross-sectional anatomy of the abdominal viscera.

**Objectives**
Implement the principles of scanning techniques in examining the abdominal viscera.

**Objectives**
Integrate previous knowledge of anatomy and physiology to sonographically identify normal anatomy and the physiology of the abdominal vasculature.

**Objectives**
Discuss the laboratory testing associated with the abdominal viscera.

**Objectives**
Explain and document the preparation that should precede a sonographic examination of the abdominal viscera.

# SON130 - Abdominal Sonography I

## Overview

**Course Description**
This course introduces abdominal and small parts sonography. Emphasis is placed on the sonographic anatomy of the abdomen and small parts with correlated laboratory exercises. Upon completion, students should be able to recognize and acquire basic abdominal and small parts images.

## Credit Hours

3

**Course Typically Offered**
Fall, Spring

## Student Learning Outcomes

**Objectives**
Perform basic abdominal imaging views using examination equipment and techniques

**Objectives**
Integrate previous knowledge of anatomy and physiology to examine the cross-sectional anatomy of the abdominal viscera.

**Objectives**
Implement the principles of scanning techniques in examining the abdominal viscera.

**Objectives**
Integrate previous knowledge of anatomy and physiology to Sonographically identify normal anatomy and the physiology of the abdominal vasculature.

**Objectives**
Discuss the laboratory testing associated with the abdominal viscera.

**Objectives**
Explain and document the preparation that should precede a sonographic examination of the abdominal viscera.

# SON131 - Abdominal Sonography II

## Overview

**Course Description**
This course covers abdominal and small parts pathology recognizable on sonograms. Emphasis is placed on abnormal sonograms of the abdomen and small parts with correlated sonographic cases. Upon completion, students should be able to recognize abnormal pathological processes in the abdomen and on small parts sonographic examinations.

## Credit Hours

2

**Course Typically Offered**
Spring, Summer

## Requisites

**Simple Requisites**

**State prerequisite**
**Type**
Prerequisite

Take SON-130

Take SON-130;

## Student Learning Outcomes

**Objectives**
Perform basic abdominal imaging views using examination equipment and techniques.

**Objectives**
Integrate previous knowledge of anatomy and physiology to examine the cross-sectional anatomy of the abdominal viscera.

**Objectives**
Implement the principles of scanning techniques in examining the abdominal viscera.

**Objectives**
Integrate previous knowledge of anatomy and physiology to Sonographically identify normal anatomy and the physiology of the abdominal vasculature.

**Objectives**
Discuss the laboratory testing associated with the abdominal viscera.

**Objectives**
Explain and document the preparation that should precede a sonographic examination of the abdominal viscera.

# SON140 - Gynecological Sonography

## Overview

**Course Description**
This course is designed to relate gynecological anatomy and pathology to sonography. Emphasis is placed on gynecological relational anatomy, endovaginal anatomy, and gynecological pathology. Upon completion, students should be able to recognize normal and abnormal gynecological sonograms.

### Credit Hours
2

**Course Typically Offered**
Fall, Spring

### Requisites
**Simple Requisites**

**State prerequisite**
**Type**
Prerequisite

Take SON-110

Take SON-110;

### Student Learning Outcomes

**Objectives**
Perform basic abdominal imaging views using examination equipment and techniques.

**Objectives**
Describe the Sonographers role in Gynecologic Sonogram

**Objectives**
Describe preparation of the patient for a gynecologic sonogram

**Objectives**
List the certification options available to a practicing sonographer.

**Objectives**
Describe normal Uterine and pelvic Anatomy in Adults and Pediatric patients.

**Objectives**
List the development stages of the female reproductive system.

**Objectives**
Identify Uterine anomalies.

**Objectives**
Explain the interconnectivity of the urinary and reproductive systems.

**Objectives**
Describe Diseases of the Female Pelvis

**Objectives**
Explain Reproductive Technologies pertinent to Medical Sonography

## SON220 - Sonography Clinical Education III

### Overview
**Course Description**
This course provides continued active participation in clinical sonography. Emphasis is placed on imaging, processing, and technically evaluating sonographic examinations. Upon completion, students should be able to image, process, and evaluate sonographic examinations.

### Credit Hours
8

**Course Typically Offered**
Fall

### Requisites
**Simple Requisites**

**State prerequisite**
**Type**
Prerequisite

Take SON-121

Take SON-121;

## SON221 - Sonography Clinical Education IV

### Overview
**Course Description**
This course provides continued active participation off campus in clinical sonography. Emphasis is placed on imaging, processing, and technically evaluating sonographic examinations. Upon completion, students should be able to image, process, and evaluate sonographic examinations.

### Credit Hours
8

**Course Typically Offered**
Spring

### Requisites
**Simple Requisites**

**State prerequisite**
**Type**
Prerequisite

Take SON-220

Take SON-220;

## Student Learning Outcomes

**Objectives**
Read Complementary Imaging

**Objectives**
Integrate previous knowledge of anatomy and physiology to examine the cross-sectional anatomy of the abdominal viscera, pelvis and fetal anatomy.

**Objectives**
Implement the principles of scanning techniques in examining the abdominal viscera, pelvis and fetal anatomy.

**Objectives**
Integrate previous knowledge of anatomy and physiology to sonographically identify normal anatomy and the physiology of the abdominal vasculature, pelvis and fetal anatomy.

**Objectives**
Discuss the laboratory testing associated with the abdominal viscera, pelvis and fetal anatomy.

**Objectives**
Explain and document the preparation that should precede a sonographic examination of the abdominal viscera, pelvis and fetal anatomy.

# SON225 - Case Studies

## Overview

**Course Description**
This course offers the opportunity to present interesting cases found during clinical education. Emphasis is placed on presentation methods which integrate patient history, laboratory results, and sonographic findings with reference to current literature. Upon completion, students should be able to correlate information necessary for complete presentation of case studies.

## Credit Hours

1

**Course Typically Offered**
Spring

## Requisites

**Simple Requisites**

**State prerequisite**
**Type**
Prerequisite

Take One: SON-110 or CVS-163

Take SON-110 or CVS-163;

## Student Learning Outcomes

**Objectives**
Perform basic abdominal, pelvic and fetal imaging views using examination equipment and techniques

# SON241 - Obstetrical Sonography I

## Overview

**Course Description**
This course covers normal obstetrical sonography techniques, the normal fetal environment, and abnormal first trimester pregnancy states. Topics include gestational dating, fetal anatomy, uterine environment, and first trimester complications. Upon completion, students should be able to produce gestational sonograms which document age, evaluate the uterine environment, and recognize first trimester complications.

## Credit Hours

2

**Course Typically Offered**
Fall, Spring

## Requisites

**Simple Requisites**

**State prerequisite**
**Type**
Prerequisite

Take SON-110

Take SON-110;

## Student Learning Outcomes

**Objectives**
Collect clinical information, organize it effectively, and present it in an academic and professional manner.

**Objectives**
Define terminology related to obstetrics

**Objectives**
Explain fertilization process

**Objectives**
Identify normal anatomic features of developing embryo

**Objectives**
Describe first trimester measurement techniques for determination of gestational age

**Objectives**
Discuss normal findings of adnexa in first trimester

**Objectives**
Correlate clinical presentation with sonographic findings

**Objectives**
Differentiate the normal and abnormal appearances of a first trimester pregnancy

**Objectives**
Discuss first trimester complications

**Objectives**
Describe sonographic findings associated with ectopic pregnancy

**Objectives**
Describe the types and sonographic appearances of abortion

**Objectives**
Identify normal fetal anatomy

**Objectives**
Describe anatomical relationship to surrounding structures

**Objectives**
Describe sonographic appearance of fetal anatomical structures and surrounding area

# SON242 - Obstetrical Sonography II

## Overview

**Course Description**
This course covers second and third trimester obstetrical complications and fetal anomalies. Topics include abnormal fetal anatomy and physiology and complications in the uterine environment. Upon completion, students should be able to identify fetal anomalies, fetal distress states, and uterine pathologies.

## Credit Hours

2

**Course Typically Offered**
Fall, Spring

## Requisites

**Simple Requisites**

**State prerequisite**
**Type**
Prerequisite

Take SON-241

Take SON-241;

## Student Learning Outcomes

**Objectives**
Indicate measurement techniques utilized in fetal gestational age and growth assessment

**Objectives**
Explain pathological variations in placental size and appearance.

**Objectives**
Identify sonographic face and brain anomalies.

**Objectives**
Associate biochemical marker to abnormal spine development.

**Objectives**
List and identify the seven views of a fetal echocardiographic examination.

**Objectives**
Describe the difference in intrathoracic anomalies.

**Objectives**
Explain the difference between omphalocele and gastroschisis.

**Objectives**
List abnormalities of genitourinary system.

**Objectives**
Summarize measurement for evaluation of fetal limbs.

**Objectives**
List components of a fetal biophysical profile.

**Objectives**
List the different types of multiple gestations.

**Objectives**
Define intrauterine growth restriction and its effects before delivery.

# SON250 - Vascular Sonography

## Overview

**Course Description**
This course provides an in-depth study of the anatomy and pathology of the vascular system. Topics include peripheral arterial, peripheral venous, and cerebrovascular disease testing. Upon completion, students should be able to identify normal vascular anatomy and recognize pathology of the vascular system.

## Credit Hours

2

**Course Typically Offered**
Fall

## Student Learning Outcomes

**Objectives**
Discuss the effects of maternal health and disease on the pregnancy outcome.

**Objectives**
Explain the relationship between pressure, flow, and resistance

**Objectives**
Describe normal and abnormal flow profiles that occur in the arterial and venous systems

**Objectives**
Identify the vessels in the extracranial and intracranial cerebrovascular system

**Objectives**
Explain the effects of collateral flow on cerebral hemodynamics

**Objectives**
List the risk factors and mechanism for cerebrovascular disease

**Objectives**
Describe the capabilities, limitations, protocol/techniques, waveforms and diagnostic criteria for cerebrovascular circulation test procedures

**Objectives**
Describe the effects of stenosis and occlusion on flow characteristics in the extracranial cerebrovascular system

**Objectives**
List the current treatment options for patients with cerebrovascular disease

**Objectives**
Identify the central, upper and lower extremity deep and superficial veins, and list the major perforating veins in the lower extremity

**Objectives**
Describe the risk factors for venous thrombosis

**Objectives**
Relate the mechanisms of disease associated with acute and chronic deep vein thrombosis, superficial thrombophlebitis, venous insufficiency and pulmonary embolism

**Objectives**
Define the clinical signs associated with acute and chronic deep vein thrombosis and superficial thrombophlebitis

## SON289 - Sonographic Topics

### Overview

**Course Description**
This course provides an overview of sonographic topics in preparation for certification examinations. Emphasis is placed on registry preparation. Upon completion, students should be able to demonstrate a comprehensive knowledge of sonography and be prepared for the registry examinations.

### Credit Hours

2

**Course Typically Offered**
Spring

### Requisites

**Simple Requisites**

**State prerequisite**
**Type**
Prerequisite

Take SON-110

Take SON-110;

### Student Learning Outcomes

**Objectives**
Describe the capabilities, limitations, patient positioning, protocol/ techniques and diagnostic criteria for the following venous examinations: duplex sonography, color flow imaging and venous refill plethysmography

**Objectives**
Demonstrate a comprehensive knowledge of sonography

## SPA111 - Elementary Spanish I

### Overview

**Course Description**
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.

### Credit Hours

3

**Course Typically Offered**
Fall, Spring, Summer

### Student Learning Outcomes

**Objectives**
Pass mock exams in physics, abdomen, and obstetrics and gynecology

**Objectives**
Interact on a basic level and write simple paragraphs using grammatically correct sentences in the present tense that incorporate the vocabulary and grammar being presented in the lessons covered.

**Objectives**
listen to recorded narration and conversation and demonstrate comprehension of same orally and in writing.

## SPA112 - Elementary Spanish II

### Overview

**Course Description**
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.

### Credit Hours

3

**Course Typically Offered**
Fall, Spring, Summer

## Requisites

**Simple Requisites**

**State prerequisite**
**Type**
Prerequisite

Take SPA-111

Take SPA-111;

## Student Learning Outcomes

**Objectives**
Read and understand textbook passages on the lesson theme and culture presented in the textbook.

**Objectives**
Interact on a basic level and write simple paragraphs using grammatically correct sentences in the present tense that incorporate the vocabulary and grammar being presented in the lessons covered.

**Objectives**
Listen to recorded narration and conversation and demonstrate comprehension of same orally and in writing.

# SPA141 - Culture and Civilization

## Overview

**Course Description**
This course provides an opportunity to explore issues related to the Hispanic world. Topics include historical and current events, geography, and customs. Upon completion, students should be able to identify and discuss selected topics and cultural differences related to the Hispanic world.

## Credit Hours

3

## Student Learning Outcomes

**Objectives**
Read and understand textbook passages on the lesson theme and culture presented in the textbook.

**Objectives**
Identify where Spanish is spoken in the world today

**Objectives**
Identify major artists and writers and discuss how their work both influenced and reflected Hispanic culture.

**Objectives**
Identify and discuss different aspects of Hispanic culture(s), and compare and contrast these aspects among the different Hispanic cultures and between the Hispanic cultures and the student's own culture.

**Objectives**
Examine the role of geography in the politics, history, economics, language, customs and culture of the countries studied.

**Objectives**
Identify key political and historical figures from both Spain and Latin America and summarize the major historical events that occurred

# SPA211 - Intermediate Spanish I

## Overview

**Course Description**
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.

## Credit Hours

3

**Course Typically Offered**
Fall, Spring, Summer

## Requisites

**Simple Requisites**

**State prerequisite**
**Type**
Prerequisite

Take SPA-112

Take SPA-112;

## Student Learning Outcomes

**Objectives**
Examine current events in the countries studied and discuss how they impact the lives of the people living in those countries as well as the rest of the global community.

**Objectives**
Listen for comprehension to recorded dialogue and passages and respond orally and in writing to questions concerning the main idea and facts presented in the passage or dialogue.

**Objectives**
Respond orally to teacher and textbook-generated questions using the grammar and vocabulary presented to date.

**Objectives**
Write simple, compound, and complex sentences in the present and past tenses and in indicative and subjunctive mood that incorporate the vocabulary and grammar being presented in the lessons covered.

**Objectives**
Read, understand, and discuss textbook passages and selected authentic literature on the lesson theme and the culture of the countries presented.

# SPA212 - Intermediate Spanish II

## Overview

**Course Description**
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.

## Credit Hours

3

**Course Typically Offered**
Spring

## Requisites

**Simple Requisites**

**State prerequisite**
**Type**
Prerequisite

Take SPA-211

Take SPA-211;

## Student Learning Outcomes

**Objectives**
Identify and discuss different aspects of Hispanic culture(s) and compare and contrast these aspects among the different Hispanic cultures and between the Hispanic cultures and the student's own culture.

**Objectives**
Communicate on an advanced level and write paragraphs using grammatically correct sentences in the present, past and future tenses that incorporate the vocabulary and grammar being reviewed in the lessons covered.

**Objectives**
Listen to recorded narration and conversation and demonstrate comprehension of same orally and in writing.

**Objectives**
Read, understand, and discuss authentic literature relating to the lesson theme.

**Objectives**
Identify and discuss different aspects of Hispanic culture(s) and compare and contrast these aspects among the different Hispanic cultures and between the Hispanic cultures and the student's own culture.

# SST110 - Introduction to Sustainability

## Overview

**Course Description**
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.

### Credit Hours
3

**Course Typically Offered**
Spring

### Student Learning Outcomes

**Objectives**
Identify well-known Hispanic writers and discuss their works.

**Objectives**
Develop a comprehensive, systems understanding of the Built Environment

**Objectives**
Describe the concepts of high performance buildings and sustainability.

**Objectives**
Demonstrate fluency implementing the required processes in current green building rating systems (i.e. LEED, NAHB, System Vision, Energy Star).

## SST120 - Energy Use Analysis

### Overview
**Course Description**
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.

### Credit Hours
3

**Course Typically Offered**
Fall

### Student Learning Outcomes

**Objectives**
Analyze and report the long-term environmental outcomes between various building materials, methods, and systems

**Objectives**
Demonstrate an understanding of energy use, audits, and controls in the analysis of energy consumption.

**Objectives**
Compute the projected energy consumption of a building from a set of plans

## SST130 - Modeling Renewable Energy

### Overview
**Course Description**
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.

### Credit Hours
3

**Course Typically Offered**
Fall, Spring

### Student Learning Outcomes

**Objectives**
Calculate various building systems and their associated affect on energy efficiencies.

**Objectives**
A basic understanding of modeling renewable energy systems and energy efficient upgrades.

**Objectives**
The ability to use computer software to aid in energy performance and financial cost analysis.

**Objectives**
Quantify the benefits and costs of different appliance selection on the energy performance in a home.

**Objectives**
Understanding the output from modeling tools and present findings by creating reports showing system assumptions, performance and payback.

## SST140 - Green Building and Design Concepts

### Overview

**Course Description**
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.

### Credit Hours

3

**Course Typically Offered**
Fall, Summer

### Student Learning Outcomes

**Objectives**
Critical thinking to understand when certain variables and assumptions are important to analyses, evaluate whether results are reasonable and troubleshoot unexpected results.

**Objectives**
Demonstrate an understanding of the concepts of high performance green buildings and sustainability.

**Objectives**
Identify current green building rating systems (i.e. LEED, NAHB).

**Objectives**
Identify the energy efficiency methods that should be considered in a building design and/or construction project.

**Objectives**
Select appropriate "green" materials for a building project.

**Objectives**
Identify Indoor Environmental Quality factors to be considered in a construction project.

**Objectives**
Identify water management strategies in a construction project.

**Objectives**
Develop a comprehensive, systems understanding of the Built Environment

**Objectives**
Describe the concepts of high performance buildings and sustainability.

**Objectives**
Demonstrate fluency implementing the required processes in current green building rating systems (i.e. LEED, NAHB, System Vision, Energy Star).

## SST210 - Issues in Sustainability

### Overview

**Course Description**
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.

### Credit Hours

3

**Course Typically Offered**
Summer

### Requisites

**Simple Requisites**

**State prerequisite**
**Type**
Prerequisite

Take SST-110

Take SST-110;

## Student Learning Outcomes

**Objectives**
Analyze and report the long-term environmental outcomes between various building materials, methods, and systems

**Objectives**
Understand how global population, business growth, resource limitations, and social inequity have created a potentially destructive global economy and how it can be transformed into a more restorative system.

**Objectives**
Understand how global sustainability is determined in large part by urban planning, transportation, infrastructure, and building systems.

**Objectives**
Understand how food supply, water use and energy use are related and why the concepts of sustainability are imperative to creating a viable and equitable world food supply system.

**Objectives**
Analyze how marketing and advertising can be used to promote true sustainability or how it can be used to portray a false sense of environmental performance.

# SWK110 - Intro to Social Work

## Overview

**Course Description**
This course examines the historical development, values, orientation, and professional standards of social work and focuses on the terminology and broader systems of social welfare. Emphasis is placed on the various fields of practice including those agencies whose primary function is financial assistance, corrections, mental and behavioral health, and protective services. Upon completion, students should be able to demonstrate an understanding of the knowledge, values, and skills of the social work professional.

## Credit Hours

3

# SWK113 - Cultural Competency & Diversity

## Overview

**Course Description**
Thius course examines and promotes understanding, sensitivity, awareness, and knowledge of various cultures and diversity. Emphasis is placed on professional responsibilities, duties, and skills critical to multicultural social services practice. Upon completion, students should be able to integrate and expand knowledge, skills, and cultural awareness relevant to diverse populations.

## Credit Hours

3

**Course Typically Offered**
Spring

## Student Learning Outcomes

**Objectives**
Describe the causes and etiology of intellectual and developmental disabilities.

**Objectives**
Analyze historical and contemporary perspectives on intellectual and developmental disabilities.

**Objectives**
Apply best practices to support the needs and challenges of individuals with intellectual and developmental disabilities.

**Objectives**
Evaluate different service provision models and interventions for individuals with intellectual and developmental disabilities.

**Objectives**
Describe approaches to advocate for the rights and inclusion of individuals with intellectual and developmental disabilities.

# SWK115 - Community Resources

## Overview

**Course Description**
This course introduces community resources essential to social work practice. Emphasis is placed on awareness of and interaction with community service personnel and stakeholders. Upon completion, students should be able to demonstrate the ability to assess critical community needs, identify resources and follow through with a plan of action for resolution.

### Credit Hours
3

## SWK220 - Ethical Considerations in Social Work

### Overview
**Course Description**
This course introduces the professional standards, values, and issues in social services. Topics include confidentiality, assessment of personal values, professional responsibilities, competencies, and ethics. Upon completion, students should be able to understand and discuss multiple ethical issues applicable to social work and apply various decision-making models to current issues.

### Credit Hours
3

## TRN110 - Introduction to Transport Technology

### Overview
**Course Description**
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.

### Credit Hours
2

**Course Typically Offered**
Fall

### Student Learning Outcomes

**Objectives**
Use critical thinking to analyze sustainability issues.

**Objectives**
Demonstrate work place safety and hazardous waste disposal per OSHA and EPA guidelines that apply to relevant transportation industry work.

**Objectives**
Given a vehicle or piece of equipment, students will be able to identify it and locate relevant service information in one or more industry-standard databases.

**Objectives**
Demonstrate proficiency hoisting transportation vehicles through use of lifts and floor jacks.

**Objectives**
Complete service repair orders with appropriate information: customer contact information; VIN; cause, concern, correction.

**Objectives**
Identify and communicate about basic systems and terms associated with the transportation industry.

**Objectives**
Distinguish between different transportation systems terms and components either on a written exercise or in a lab environment.

**Objectives**
Demonstrate proper use and care of related transportation industry tools and equipment.

## TRN111 - Chassis Maintenance and Light Repair

### Overview
**Course Description**
This course covers maintenance and light repair of transportation suspension, steering, and brake systems. Topics include general servicing and inspection procedures of steering and suspension systems, wheels and tires, and drum and disc brakes including hydraulic and power-assist units. Upon completion, students should be able to perform maintenance and light repair of transportation suspension, steering, and brake systems.

### Credit Hours
4

**Course Typically Offered**
Spring

### Student Learning Outcomes

**Objectives**
Correctly identify or describe government regulations associated with the transportation industry.

## TRN112 - Powertrain Maintenance and Light Repair

### Overview

**Course Description**
This course covers maintenance and light repair of transportation engines, automatic and manual transmission/transaxles, engine performance systems, and HVAC systems. Topics include general servicing and inspection procedures of engines, engine lubrication and cooling systems, automatic and manual transmission/transaxles, HVAC components, and fuel, air induction, and exhaust systems. Upon completion, students should be able to perform maintenance and light repair of transportation engines, automatic and manual transmission/ transaxles, engine performance systems, and HVAC systems.

### Credit Hours

4

**Course Typically Offered**
Fall

### Student Learning Outcomes

**Objectives**
Perform maintenance and light repair of transportation suspension, steering, and brake systems.

## TRN120 - Basic Transportation Electricity

### Overview

**Course Description**
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.

### Credit Hours

5

**Course Typically Offered**
Fall, Spring

### Student Learning Outcomes

**Objectives**
Perform maintenance and light repair of transportation suspension, steering, and brake systems.

**Objectives**
Demonstrate work place safety related to transportation electrical systems.

**Objectives**
Interpret and apply wiring diagram information on a transportation vehicle electrical system.

**Objectives**
Demonstrate the proper use of electrical diagnostic test equipment.

**Objectives**
Use Ohm's law to calculate the value of any of the following given the values of the remaining variables: Voltage (V), Resistance (R), Amperage (A)

**Objectives**
Given a transportation vehicle with a fault in the battery, starting, and charging system, students will be able to perform successful diagnosis and repairs.

## TRN130 - Introduction to Sustainable Transportation

### Overview

**Course Description**
This course provides an overview of alternative fuels and alternative fuel vehicles. Topics include composition and use of alternative fuels including compressed natural gas, biodiesel, ethanol, hydrogen, and synthetic fuels, hybrid/electric, and vehicles using alternative fuels. Upon completion, students should be able to identify alternative fuel vehicles, explain how each alternative fuel delivery system operates, and perform minor repairs.

### Credit Hours

3

**Course Typically Offered**
Fall, Spring

## Student Learning Outcomes

**Objectives**
Demonstrate the ability to obtain appropriate service information on electrical circuit construction.

**Objectives**
Identify alternative fuels used in transportation industry to reduce the dependency on fossil fuels.

**Objectives**
Describe appropriate safety practices used when servicing and repairing Hybrid Electric Vehicles (HEVs).

**Objectives**
Correctly identify or describe how each alternative fuel is delivered and used in modern transportation vehicles and equipment.

**Objectives**
Identify diagnostic procedures and repairs associated with alternative fueled transportation vehicles and equipment.

**Objectives**
Describe the similarities and differences between various types of Hybrid Electric Vehicle (HEV) power systems found in modern transportation and equipment.

# TRN140 - Transportation Climate Control

## Overview

**Course Description**
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.

## Credit Hours

2

**Course Typically Offered**
Summer

## Student Learning Outcomes

**Objectives**
Identify emerging fuel sources for the transportation industry that are currently in development and describe their characteristics.

**Objectives**
In a lab setting, demonstrate work place safety per OSHA and EPA guidelines that apply to relevant climate control systems found on transportation vehicles and equipment.

**Objectives**
Given a transportation vehicle or related equipment with a fault to the climate control system, diagnose and repair the climate control system using the recommended lab equipment as outlined by the related service information.

**Objectives**
Using the recommended equipment as outlined by the EPA, identify and perform the proper recovery and recycling procedures for any refrigerant in a transportation vehicle or related equipment.

**Objectives**
Describe the operation of the heating, ventilation and air condition systems.

**Objectives**
Describe the use of climate control testing equipment to aid diagnosis of the systems.

**Objectives**
Describe the use of appropriate service information and capacity charts.

# TRN140A - Transportation Climate Control Lab

## Overview

**Course Description**
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.

## Credit Hours

2

**Course Typically Offered**
Summer

## Requisites

**Simple Requisites**

**State recommended concurrent or previous courses**
**Type**
Corequisite

Take TRN-140

Take TRN-140(S23460);

## Student Learning Outcomes

**Objectives**
Describe the EPA regulations that govern the proper use of refrigerants in a transportation vehicle or related equipment.

**Objectives**
Given a transportation vehicle or related equipment with a fault in the A/C system, diagnose and repair the system using the recommended lab equipment and service information.

**Objectives**
Utilize proper equipment to identify a given A/C refrigerant type and the purity of the A/C refrigerant for the transportation industry.

**Objectives**
Given a transportation vehicle or equipment with an A/C system, determine the recommended refrigerant oil and capacity levels as prescribed from related service information.

**Objectives**
Given a transportation vehicle or equipment with an A/C system, use the recommended equipment to properly reclaim, recycle, evacuate and recharge the entire refrigerant system.

**Objectives**
Given a Heating Ventilation and Air Conditioning (HVAC) system, properly drain, flush and refill the entire anti-freeze coolant system.

**Objectives**
Given a Heating Ventilation and Air Conditioning (HVAC) system, evaluate the anti-freeze coolant condition and perform a systems test as recommended by service information for a transportation vehicle or equipment.

**Objectives**
Diagnose and repair a transportation vehicle or equipment with a fault in a protection device for the given A/C system.

**Objectives**
Given an A/C system, remove and inspect system components and seals for damage which may cause the system to leak refrigerant.

# TRN145 - Advanced Transportation Electronics

## Overview

**Course Description**
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.

## Credit Hours

3

**Course Typically Offered**
Spring

## Requisites

**Simple Requisites**

**State prerequisite**
**Type**
Prerequisite

Take TRN-120

Take TRN-120(S23456);

## Student Learning Outcomes

**Objectives**
Given a faulty climate control system, diagnose temperature control problems.

**Objectives**
Given a transportation vehicle or related equipment, diagnose and repair a failure in the lighting, gauges, and accessory circuits by using the recommended lab or test equipment as outlined by the related service information.

**Objectives**
Correctly describe the processes involved in electrical system diagnosis on modern transportation vehicles or equipment.

**Objectives**
Given a transportation vehicle or equipment, diagnose and repair a fault in the controller area network (CAN) system by using the recommended lab or test equipment as outlined by the related service information.

**Objectives**
In a lab setting, demonstrate the proper use of electrical diagnostic equipment that apply to transportation vehicles and equipment.

**Objectives**
Given a transportation vehicle or equipment, diagnose and repair a fault in the electronic control system by using the recommended lab or test equipment as outlined by the related service information.

**Objectives**
Demonstrate appropriate diagnostic procedures for sensors, controllers, and circuits by using the recommended test equipment as outlined by service information.

**Objectives**
Correctly identify or describe complex transportation vehicle systems such as, collision avoidance, high intensity headlamps, navigation, and communication systems.

# TRN170 - PC Skills for Transportation

## Overview

**Course Description**
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.

## Credit Hours

2

**Course Typically Offered**
Fall, Spring

## Student Learning Outcomes

**Objectives**
Given a transportation vehicle or equipment, replace or reprogram an electronic system controller as outlined by the related service information.

**Objectives**
Given a transportation vehicle or equipment, identify it and locate relevant service information from one or more industry-standard databases.

**Objectives**
Given a transportation vehicle or equipment, analyze and diagnose transportation on board diagnostic management systems using handheld and/or PC based diagnostic equipment.

**Objectives**
Describe and perform basic PC skills used by transportation technicians.

## TRN180 - Basic Welding for Transportation

### Overview

**Course Description**
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

### Credit Hours

3

**Course Typically Offered**
Fall, Summer

### Student Learning Outcomes

**Objectives**
Demonstrate the proper use of application software such as MS Word.

**Objectives**
Describe and list the proper fundamentals, processes and equipment, materials and metallurgy associated with welding of similar and dissimilar metals in transportation systems and equipment.

**Objectives**
Identify and describe safety and health practices associated with the welding of similar and dissimilar metals in transportation systems and equipment.

**Objectives**
In a lab setting, demonstrate the ability to successfully weld similar and dissimilar metals in transportation systems and equipment.

**Objectives**
Select and list the proper inspection methods associated with the welding of similar and dissimilar metals in transportation systems and equipment.

**Objectives**
In a lab setting, demonstrate proper setup and operational procedures associated with the welding of similar and dissimilar metals in transportation systems and equipment.

## VET110 - Animal Breeds and Husbandry

### Overview

**Course Description**
This course provides a study of the individual breed characteristics and management techniques of the canine, feline, equine, bovine, porcine, ovine, caprine, and laboratory animals. Topics include physiological data, animal health management, and basic care and handling of animals. Upon completion, students should be able to identify breeds of domestic and laboratory animals, list physiological data, and outline basic care, handling, and management techniques.

### Credit Hours

3

**Course Typically Offered**
Fall

### Student Learning Outcomes

**Objectives**
Describe and list the cutting techniques used with the various tools and methods associated with transportation systems and equipment.

**Objectives**
Identify breeds of common domestic and laboratory animals

**Objectives**
List physiological data for each species covered

## VET114 - Introduction to Veterinary Medicine Technology

### Overview

**Course Description**
This course introduces the standard operating procedures and responsibilities of veterinary medical technology departments, common zoonotic diseases, safety and ethical issues, and USDA/DEA/OSHA regulations/compliance. Emphasis is placed on standard operating procedures, zoonotic diseases, safety and ethical issues, and the importance of USDA/DEA/OSHA regulations and compliance. Upon completion, students should be able to perform duties assigned in veterinary medical technology, recognize potential zoonotic diseases, and establish safety protocols/regulatory compliance.

### Credit Hours
1

**Course Typically Offered**
Fall, Spring, Summer

### Student Learning Outcomes

**Objectives**
Outline basic care, handling, and management techniques for each species covered

**Objectives**
Summarize the history of the CCCC VMT program

**Objectives**
Recognize common zoonotic diseases

**Objectives**
Discuss the rules and regulations pertaining to the care and use of teaching animals and animals in research

**Objectives**
Recognize basic USDA, DEA, and OSHA regulations and compliance

**Objectives**
Discuss ethical issues as it pertains to veterinary medicine

**Objectives**
Calculate basic dosage problems

## VET120 - Veterinary Anatomy & Physiology

### Overview

**Course Description**
This course covers the structure and function of the animal body with emphasis on the similarities and differences among domestic animals. Emphasis is placed on the structure and function of the major physiological systems of domestic, laboratory, and zoo animals. Upon completion, students should be able to identify relevant anatomical structure and describe basic physiological processes for the major body systems.

### Credit Hours
4

**Course Typically Offered**
Fall, Spring

### Requisites

**Simple Requisites**

**Local**
**Type**
Prerequisite

Completion of one of the following high school biology course,BIO-094 or BIO-110, or permission of the instructor

Take BIO-094(S24053) or BIO-110(S24019);

### Student Learning Outcomes

**Objectives**
Recognize and discuss basic animal behavior and restraint methods

**Objectives**
Define scientific terms associated with the study of anatomy and physiology

**Objectives**
Identify the anatomical structures associated with the major animal body systems

## VET121 - Veterinary Medical Terminology

### Overview

**Course Description**
This course covers the basic medical terminology required for veterinary technicians. Topics include the pronunciation, spelling and definition of word parts and vocabulary terms unique to the anatomy, clinical pathology, and treatment of animals. Upon completion, students should be able to demonstrate knowledge and understanding of basic medical terms as they relate to veterinary medicine.

### Credit Hours
3

**Course Typically Offered**
Fall, Spring, Summer

## Student Learning Outcomes

**Objectives**
Explain primary physiological functions within the animal body

**Objectives**
Recognize and properly define the root words, prefixes, suffixes, and terminals covered in this course

**Objectives**
Properly pronounce medical terms

**Objectives**
Spell medical terms accurately

# VET123 - Veterinary Parasitology

## Overview

**Course Description**
This course covers the common internal and external parasites of companion animals, livestock, selected zoo animals, and wild animals. Emphasis is placed on laboratory diagnosis of the most common forms of the parasite through fecal, urine, skin, and blood exams. Upon completion, students should be able to identify common parasites and discuss life-cycles, treatment and prevention strategies, and public health aspects of veterinary parasitology.

## Credit Hours

3

**Course Typically Offered**
Spring

## Requisites

**Simple Requisites**

**Prerequisite**
**Type**
Prerequisite

None Take VET-120;

Take VET-120(S14046);

## Student Learning Outcomes

**Objectives**
Apply medical terminology in relation to anatomy, physiology, diseases and medical procedures

**Objectives**
Define parasitology and associated terminology applicable to it's study.

**Objectives**
Identify grossly and/or microscopically internal and external parasites of veterinary importance.

**Objectives**
Summarize in writing the common and scientific names, hosts, intermediate hosts, sites, and life cycles of common veterinary parasites.

**Objectives**
Outline pathogenesis, clinical signs and control of internal and external parasites.

**Objectives**
Perform diagnostic testing procedures on relevant patient samples.

# VET125 - Veterinary Diseases I

## Overview

**Course Description**
This course introduces basic immunology, fundamentals of disease processes including inflammation, and common infectious diseases of animals and their prevention through immunization. Topics include fundamental disease processes, principles of medical therapy, immunologic processes, infections and zoonotic diseases of domestic animals, and prevention of disease. Upon completion, students should be able to describe basic disease and immunological processes, recognize infections and zoonotic diseases, and discuss prevention strategies.

## Credit Hours

2

**Course Typically Offered**
Spring

## Student Learning Outcomes

**Objectives**
Identify zoonotic diseases and modes of transmission in the veterinary field as it applies to parasitology.

**Objectives**
Describe basic disease and immunological processes as they relate to body systems

**Objectives**
Identify clinical signs of common veterinary diseases

**Objectives**
Demonstrate disease prevention techniques through vaccination programs and disinfection

**Objectives**
Recognize common infectious diseases of domestic animals, including bacterial, fungal, and viral origins

**Objectives**
Identify zoonotic diseases and modes of transmision in the veterinary field

**Objectives**
Choose appropriate saftey protocols to avoid disease transmission

# VET126 - Veterinary Diseases II

## Overview

**Course Description**
This course is the study of basic disease processes and fundamentals of pathology, and other selected topics of veteranary medicine. Topics include histopathology, pathologic changes associated with common diseases of animals, necropsy procedures, and specimen handling. Upon completion, students should be able to describe basic pathologic changes associated with disease, recognize histopathologic changes, and properly perform collection and submission of necropsy specimens.

## Credit Hours

2

**Course Typically Offered**
Fall

## Requisites

**Simple Requisites**

**State prerequisite**
**Type**
Prerequisite

Take VET-125

Take VET-125;

## Student Learning Outcomes

**Objectives**
Explain how to handle rabies suspects and samples safely

**Objectives**
Identify clinical signs of common veterinary diseases

**Objectives**
Identify zoonotic diseases and modes of transmission in the veterinary field

**Objectives**
Distinguish key nutritional factors in diseases processes

**Objectives**
Describe basic pathological changes associated with common disease processes

**Objectives**
Recognize histopathologic changes

**Objectives**
Perform collection and submission of necropsy samples

# VET131 - Veterinary Lab Techniques I

## Overview

**Course Description**
This course includes the fundamental study of hematology, hemostasis, and urinalysis. Emphasis is placed on basic hematology and urinalysis techniques, manual skill development, instrumentation, quality control, and applications to veterinary science. Upon completion, students should be able to perform manual and automated CBCs, hemostatic assays, and complete urinalyses and maintain laboratory equipment and quality control.

## Credit Hours

3

**Course Typically Offered**
Summer

## Requisites

**Simple Requisites**

**Prerequisite**
**Type**
Prerequisite

Take VET-120(S14046);

**State prerequisite**
**Type**
Prerequisite

Take VET-123

Take VET-123;

**State concurrent or previous courses**
**Type**
Corequisite

Take VET-133

Take VET-133(S13076);

## Student Learning Outcomes

**Objectives**
Handle disposal of dead animals

**Objectives**
Perform the following diagnostic procedures: microhematocrit, CBC, manual and automated cell counts, hemostatic assays, urinalysis, and quality control tests

**Objectives**
Summarize the maintenance of laboratory equipment

**Objectives**
Identify and differentiate different blood cells microscopically

# VET133 - Veterinary Clinical Practice I

## Overview

**Course Description**
This course introduces basic practices and techniques of the veterinary clinic and biomedical research fields for dogs, cats, and laboratory animals. Topics include physical exam, husbandry, housing, sanitation, restraint and handling, administration of medications, anesthesia and euthanasia techniques, grooming, and dentistry. Upon completion, students should be able to properly restrain, medicate, examine, groom, and maintain each of the species studied.

## Credit Hours

3

**Course Typically Offered**
Summer

## Requisites

**Simple Requisites**

**State concurrent or previous courses**
**Type**
Corequisite

Take VET-120

Take VET-120(S14046);

## Student Learning Outcomes

**Objectives**
Recognize and adhere to laboratory safety procedures

**Objectives**
Perform restraint of dogs, cats, rats, and rabbits

**Objectives**
Perform physical exams on dogs, cats, rats, and rabbits

**Objectives**
Calculate and administer oral and parenteral medications

**Objectives**
Perform bathing and grooming techniques

**Objectives**
Summarize and perfom proper husbandry an dcare of dogs, cats, rats and rabbits

**Objectives**
Operate common medical equipment

# VET137 - Veterinary Office Practices

## Overview

**Course Description**
This course is designed to teach basic administrative techniques, client communication skills, and regulations pertaining to veterinary medicine. Topics include record keeping, telephone techniques, professional liability, office procedures, state and national regulatory laws, human relations, and animal welfare. Upon completion, students should be able to demonstrate effective communication techniques, office procedures, and knowledge of regulatory laws and issues relating to animal welfare.

## Credit Hours
2

**Course Typically Offered**
Fall, Spring, Summer

## Student Learning Outcomes

**Objectives**
Perform sample collection for diagnostic tests

**Objectives**
Model effective written and verbal communication skills.

**Objectives**
Explain and practice basic office procedures.

# VET211 - Veterinary Lab Techniques II

## Overview

**Course Description**
This course covers advanced hematology, serology, immunology, and clinical chemistry. Topics include advanced hematologic, serologic, and immunologic test procedures: manual and automated clinical chemistry procedures: laboratory safety: and quality control. Upon completion, students should be able to collect, prepare, and analyze serum and plasma samples and outline quality control and safety procedures.

## Credit Hours
3

**Course Typically Offered**
Fall

## Requisites

**Simple Requisites**

**State prerequisite**
**Type**
Prerequisite

Take VET-131

Take VET-131;

**State concurrent or previous courses**
**Type**
Corequisite

Take VET-213

Take VET-213(S13159);

## Student Learning Outcomes

**Objectives**
Summarize regulatory laws relating to veterinary medicne.

**Objectives**
Perform a complete urinalysis

**Objectives**
Identify blood parasites

**Objectives**
Perform coagulation tests

**Objectives**
Perform blood chemistry tests (BUN, glucose, common enzymes)

**Objectives**
Collect serum and plasma samples from patients

**Objectives**
Prepare serum and plasma samples for analysis

**Objectives**
Calculate erythrocyte indices

**Objectives**
Identify types of anemia

**Objectives**
Conduct appropriate quality control in the laboratory for all procedures

# VET212 - Veterinary Lab Techniques III

## Overview

**Course Description**
This course introduces the basic principles of microbiology, histology, and cytology. Emphasis is placed on collection of microbiological samples for culture and sensitivity and collection and preparation of samples for histological and cytological examination. Upon completion, students should be able to perform microbiological culture and sensitivity and evaluate cytology and histology specimens.

## Credit Hours

3

**Course Typically Offered**
Spring

## Requisites

**Simple Requisites**

**State prerequisite**
**Type**
Prerequisite

Take VET-211

Take VET-211;

**State concurrent or previous courses**
**Type**
Corequisite

Take VET-214

Take VET-214(S13177);

## Student Learning Outcomes

**Objectives**
Follow Laboratory Safety Procedures

**Objectives**
Collect microbiological samples for bacterial culture

**Objectives**
Culture both aerobically and anaerobically bacterial cultures

**Objectives**
Prepare microbiological samples for staining

**Objectives**
Collect microbiological samples for fungal culture

**Objectives**
Perform culture sensitivity testing

**Objectives**
Properly collect cytology and histology specimens

**Objectives**
Properly stain cytology and histology specimens

**Objectives**
Properly read cytology and histology specimens

**Objectives**
Prepare samples for histology shipment to diagnostic labs

# VET213 - Veterinary Clinical Practice II

## Overview

**Course Description**
This course covers basic radiography, anesthesia techniques, dentistry, sample collection and handling, surgical assistance and instrumentation, sterile techniques, and patient record keeping. Topics include basic radiography, injectable and gas anesthesia, dentistry, instrument identification and care, sterile surgical technique, specimen collection and processing, and maintenance of patient records. Upon completion, students should be able to take and process radiographs, administer and monitor anesthesia, assist in surgical procedures, collect specimens, and maintain surgical records.

## Credit Hours

4

**Course Typically Offered**
Fall

## Requisites

**Simple Requisites**

**State prerequisite**
**Type**
Prerequisite

Take VET-133

Take VET-133(S13076);

## Student Learning Outcomes

**Objectives**
Prepare samples for cytology shipment to diagnostic labs

**Objectives**
Perform veterinary nursing techniques

**Objectives**
Administer and monitor injectable and inhalant anesthesia

**Objectives**
Perform emergency response techniques

**Objectives**
Recognize periodontal disease and perform dental procedures

**Objectives**
Identify surgical instruments

**Objectives**
Perform aseptic techniques

# VET214 - Veterinary Clinical Practice III

## Overview

**Course Description**
This course covers advanced anesthetic techniques, special radiographic techniques, advanced dentistry, sample collection and processing, bandaging, and emergency and critical care procedures. Topics include induction and maintenance of anesthesia, radiographic contrast studies, advanced dentistry, external coaptation, intensive care procedures, and advanced sample collection techniques. Upon completion, students should be able to demonstrate proficiency in sample collection, radiology, anesthesia, critical care and emergency procedures, and dentistry.

## Credit Hours

4

**Course Typically Offered**
Spring

## Requisites

**Simple Requisites**

**State prerequisite**
**Type**
Prerequisite

Take VET-213
Take VET-213(S13159);

## Student Learning Outcomes

**Objectives**
Summarize radiation safety measures

**Objectives**
Obtain and process diagnostic radiographs while applying appropriate safety measures

**Objectives**
Administer and monitor anesthesia

**Objectives**
Assist in surgical procedures

**Objectives**
Perform veterinary nursing techniques

**Objectives**
Perform dental procedures and properly chart

# VET215 - Veterinary Pharmacology

## Overview

**Course Description**
This course introduces drugs and other substances utilized in veterinary medicine. Emphasis is placed on drug classification and methods of action, administration, effects and side effects, storing and handling of drugs, and dosage calculations. Upon completion, students should be able to properly calculate and administer medications, recognize adverse reactions, and maintain pharmaceutical inventory and administration records.

## Credit Hours

3

**Course Typically Offered**
Fall

## Requisites

**Simple Requisites**

**State prerequisite**
**Type**
Prerequisite

Take One Set: Set 1: CHM-130 and CHM-130A Set 2: CHM-151

Take 1 group; # Take CHM-130 CHM-130A; # Take CHM-151;

**State concurrent or previous courses**
**Type**
Corequisite

Take VET-213

Take VET-213(S13159);

## Student Learning Outcomes

**Objectives**
Generate and maintain proper written medical records

**Objectives**
Explain the general principles of pharmacokinetics and how drugs are grouped and classed

**Objectives**
Summarize the class, use, effects, and relevant contraindications of common veterinary medications

**Objectives**
Label dispensed drugs according to FDA and DEA guidelines

**Objectives**
Calculate dosages and select appropriate quantities and administration routes when dispensing medications

**Objectives**
Summarize how to store, safely handle, and dispose of biologic and therapeutic agents, pesticides, insecticides, and other hazardous waste

**Objectives**
Define and differentiate between over-the-counter, prescription, and controlled drugs according to FDA and DEA regulations

# VET217 - Large Animal Clinical Practice

## Overview

**Course Description**
This course covers topics relevant to the medical and surgical techniques for the common domestic large animal species. Topics include physical exam, restraint, sample collection, bandaging, emergency treatment, surgical and obstetrical procedures and instruments, herd health, and lameness topics. Upon completion, students should be able to safely perform restraint, examination, and sample collection; assist surgical, obstetrical, and emergency procedures; and discuss herd health.

## Credit Hours

3

**Course Typically Offered**
Spring

## Requisites

**Simple Requisites**

**State prerequisite**
**Type**
Prerequisite

Take VET-120

Take VET-120(S14046);

**State concurrent or previous courses**
**Type**
Corequisite

Take VET-213

Take VET-213(S13159);

## Student Learning Outcomes

**Objectives**
Outline inventory control procedures in the veterinary pharmacy

**Objectives**
Perform common restraint methods

**Objectives**
Perform physical examinations

**Objectives**
Collect samples for further diagnostics

# VET237 - Animal Nutrition

## Overview

**Course Description**
This course covers the principles of nutrition and their application to feeding practices of domestic, farm, and companion animals. Topics include basic nutrients and nutritional needs of individual species, proximate analysis, interpretation of food and feed labels, types of animal foods, and ration formulation. Upon completion, students should be able to select appropriate diets for animals in various stages of health and disease, analyze nutrition labels, and identify foods.

## Credit Hours

3

**Course Typically Offered**
Spring, Summer

## Student Learning Outcomes

**Objectives**
Discuss herd health topics

**Objectives**
Summarize the general principles of nutrition and veterinary diets as they apply to the veterinary technician's role in practice

**Objectives**
Recognize different types of prescription veterinary diets and explain their usages with the management of various disease processes

**Objectives**
Identify different grains, hays, and forages used for livestock

**Objectives**
Calculate rations and caloric intake needs for common domestic species and their various life stages and energy requirements

**Objectives**
Interpret and analyze food and nutrition labels

**Objectives**
Discuss nutrition and obesity in pet populations as it relates to client education

# WBL110 - World of Work

## Overview

**Course Description**
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.

## Credit Hours

1

**Course Typically Offered**
Fall, Spring, Summer

## Student Learning Outcomes

**Objectives**
Identify common food toxins and poisonous plants as they relate to the care of common domestic species

# WBL110A - World of Work Lab

## Overview

**Course Description**
This course provides a laboratory experience that covers the knowledge necessary for gaining and maintaining employment. Topics include job search and job interview skills, employment expectations, and employment preparation. Upon completion, students should be able to demonstrate how to successfully make the transition from postsecondary education to work.

## Credit Hours

1

**Course Typically Offered**
Fall, Spring, Summer

## Requisites

**Simple Requisites**

**State concurrent courses**
**Type**
Corequisite

Take WBL-110

Take WBL-110;

# WBL111 - Work-Based Learning I

## Overview

**Course Description**
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.

### Credit Hours
1

**Course Typically Offered**
Fall, Spring, Summer

### Student Learning Outcomes

**Objectives**
Make the transition from school into the industry successfully.

**Objectives**
Demonstrate completion of measurable learning objectives.

**Objectives**
Evaluate their work experience as it relates to their course of study.

**Objectives**
Gain experience learning skills that relate to their course of study.

## WBL111AB - Work-Based Learning I

### Overview

**Course Description**
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.

### Credit Hours
0.5

## WBL111BB - Work-Based Learning I

### Overview

**Course Description**
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.

### Credit Hours
0.5

### Requisites

**Simple Requisites**

**Required concurrent or previous courses**
**Type**
Corequisite

Take WBL-111AB

Take WBL-111AB;

## WBL112 - Work-Based Learning I

### Overview

**Course Description**
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.

### Credit Hours
2

**Course Typically Offered**
Summer

### Student Learning Outcomes

**Objectives**
Evaluate career selection.

**Objectives**
Evaluate career selection.

**Objectives**
Demonstrate employability skills, and satisfactorily perform work-related competencies.

**Objectives**
Demonstrate completion of measurable learning objectives.

**Objectives**
Evaluate their work experience as it relates to their course of study.

# WBL112AB - Work-Based Learning I

## Overview

**Course Description**
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.

## Credit Hours

1

**Course Typically Offered**
Fall

# WBL112BB - Work-Based Learning I

## Overview

**Course Description**
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.

## Credit Hours

1

**Course Typically Offered**
Spring

## Requisites

**Simple Requisites**

**Required concurrent or previous courses**
**Type**
Corequisite

Take WBL-112AB

Take WBL-112AB;

# WBL121 - Work-Based Learning II

## Overview

**Course Description**
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.

## Credit Hours

1

**Course Typically Offered**
Fall, Spring, Summer

## Student Learning Outcomes

**Objectives**
Reflect and write about the work-based learning experience.

**Objectives**
Provide the student with a comprehensive “hands-on” work experience.

**Objectives**
Reflect and write about the work based learning experience.

**Objectives**
Develop measurable learning objectives.

**Objectives**
Evaluate career selection.

**Objectives**
Demonstrate employability skills.

# WBL122 - Work-Based Learning II

## Overview

**Course Description**
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.

## Credit Hours

2

# WBL131 - Work-Based Learning III

## Overview

**Course Description**
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.

## Credit Hours

1

# WEB110 - Web Development Fundamentals

## Overview

**Course Description**
This course introduces World Wide Web Consortium (W3C) standard markup language. Topics include creating web pages, responsive design, file transfer, deployment, accessibility, and other related W3C topics. Upon completion, students should be able to deploy a hand-coded website created using the HyperText Markup Language (HTML) and Cascading Style Sheet (CSS) standards.

## Credit Hours

3

**Course Typically Offered**
Spring, Summer

## Student Learning Outcomes

**Objectives**
Satisfactorily perform work-related competencies.

**Objectives**
Demonstrate an understanding of Internet and Web Concepts.

**Objectives**
Use web browsers and web search tools effectively.

**Objectives**
Use HTML and CSS to design, develop, and hand-code Web pages and Web sites.

# WEB115 - Web Markup and Scripting

## Overview

**Course Description**
This course introduces Worldwide Web Consortium (W3C) Internet programming using JavaScript. Topics include basic syntax, object-oriented programming, functions, variables, events, arrays, validation, accessibility, and web standards. Upon completion, students should be able to write, debug, maintain well-formed and well documented interactive web content using JavaScript code.

## Credit Hours

3

**Course Typically Offered**
Fall, Spring

## Student Learning Outcomes

**Objectives**
Publish a Web site locally or through FTP.

**Objectives**
Develop Web pages using HTML5 and Cascading Style Sheets

**Objectives**
Add dynamic and interactive content to web pages using JavaScript

**Objectives**
Validate HTML forms using JavaScript

**Objectives**
Design, code and test scripts using the JavaScript programming language.

# WEB151 - Mobile Application Development I

## Overview

**Course Description**
This course introduces students to programming technologies, design, and development related to mobile applications. Topics include accessing device capabilities, compliance with industry standards, and programming for mobile applications. Upon completion, students should be able to develop basic applications for mobile devices.

## Credit Hours

3

**Course Typically Offered**
Spring

## Student Learning Outcomes

**Objectives**
Trace and debug scripts written in the JavaScript programming language.

**Objectives**
Develop mobile applications using several platforms.

**Objectives**
Use Brackets or similar assistive text editing tools to develop mobile web sites.

**Objectives**
Convert mobile web sites to mobile applications.

**Objectives**
Use HTML, CSS and Javascript to develop mobile sites and apps.

## WEB214 - Social Media

### Overview

**Course Description**
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.

### Credit Hours

3

**Course Typically Offered**
Fall, Spring

### Student Learning Outcomes

**Objectives**
Demonstrate the jquery mobile library and its uses.

**Objectives**
Identify various types of social media.

**Objectives**
To understand various types of social media and distinguish among their purposes.

**Objectives**
Determine the types of social media best suited for their business/ organization based on the features of each.

**Objectives**
To utilize one or more types of social media for the student's business (or that one might apply for his future business).

**Objectives**
To understand and integrate social media into current and existing marketing campaigns.

**Objectives**
To decide whether or not to begin blogging with an understanding of the types of platforms available.

**Objectives**
Utilize tools that analyze, measure, and/or assist in understanding social media successes and value.

## WLD110 - Cutting Processes

### Overview

**Course Description**
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.

### Credit Hours

2

**Course Typically Offered**
Fall, Spring, Summer

### Student Learning Outcomes

**Objectives**
To understand branding and social media's impact on an organization's branding.

**Objectives**
Identify the parts and functions of an oxy-acetylene cutting torch.

**Objectives**
Identify the parts and functions of various cutting equipment.

**Objectives**
List the safety practices of using oxy-fuel, plasma-arc, and other cutting equipment.

**Objectives**
Set-up and adjust cutting equipment.

## WLD112 - Basic Welding Processes

### Overview

**Course Description**
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.

### Credit Hours

2

**Course Typically Offered**
Fall, Spring

### Student Learning Outcomes

**Objectives**
Use an oxy-acetylene outfit, plasma cutting equipment, and other equipment to: a.Cut a straight marked line on various thickness steel plate. b.Cut various shapes out of carbon steel plate. c.Cut carbon steel plate to a bevel and pipe.

**Objectives**
Set up oxy-acetylene torch kit using all applicable safety procedures.

**Objectives**
Perform oxy-acetylene gas welding, cutting, and brazing procedures.

**Objectives**
Select appropriate welding procedure, equipment, and rods for specific applications.

## WLD115 - SMAW (Stick) Plate

### Overview

**Course Description**
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.

### Credit Hours

5

**Course Typically Offered**
Fall

### Student Learning Outcomes

**Objectives**
Identify different types of metals and materials by appropriate methods.

**Objectives**
Demonstrate SMAW electrode classification in compliance with AWS codes.

**Objectives**
Perform a groove weld according to AWS D1.1.

**Objectives**
Demonstrate safe and proper SMAW equipment setup, operation, and shut-down practices in accordance to manufacturer's recommendations.

## WLD115A - SMAW (stick) Plate

### Overview

**Course Description**
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.

### Credit Hours

4

**Course Typically Offered**
Spring

## WLD115B - SMAW (stick) Plate

### Overview

**Course Description**
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.

### Credit Hours

1

**Course Typically Offered**
Fall, Spring

### Requisites

**Simple Requisites**

**Prerequisite**
**Type**
Prerequisite

None Take WLD-115A;

Take WLD-115A;

## WLD116 - SMAW (stick) Plate/Pipe

### Overview

**Course Description**
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.

### Credit Hours

4

**Course Typically Offered**
Fall, Summer

### Requisites

**Simple Requisites**

**State prerequisite**
**Type**
Prerequisite

Take WLD-115

Take WLD-115(S23304);

### Student Learning Outcomes

**Objectives**
Perform welds in various positions using SMAW (stick) fillet and groove welds using various prescribed electrodes.

**Objectives**
Select appropriate welding procedure, equipment, and rods for specific applications.

**Objectives**
Set up electric arc welding machines using all applicable safety procedures.

**Objectives**
Perform proper material layout and preparation.

**Objectives**
Perform single-v groove welds in the 1G, 2G, 3G, and 4G weld positions on carbon plate with prescribed electrodes.

## WLD117 - Industrial SMAW

### Overview

**Course Description**
This course introduces the SMAW (stick) process for joining carbon steel components for industrial applications. Topics include padding, fillet, and groove welds in various positions with SMAW electrodes. Upon completion, student should be able to safely perform SMAW fillet and groove welds on carbon steel plate with prescribed electrodes.

### Credit Hours

3

**Course Typically Offered**
Fall, Spring

### Student Learning Outcomes

**Objectives**
Perform fillet and single-v groove welds on carbon pipe.

**Objectives**
Select appropriate welding procedure, equipment, and rods for specific applications.

**Objectives**
Set up electric arc welding machines using all applicable safety procedures.

## WLD121 - GMAW (MIG) FCAW/Plate

### Overview

**Course Description**
This course introduces metal arc welding and flux core arc welding processes. Topics include equipment set up and fillet and groove welds with emphasis on the application of proper GMAW and FCAW consumables on carbon steel plate. Upon completion, students should be able to perform fillet welds on carbon steel with prescribed filler materials in the flat, horizontal, and overhead positions.

### Credit Hours

4

# WLD121AB - GMAW (MIG) FCAW/Plate

## Overview

**Course Description**
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.

## Credit Hours

2

**Course Typically Offered**
Spring

# WLD121BB - GMAW (MIG) FCAW/Plate

## Overview

**Course Description**
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.

## Credit Hours

2

**Course Typically Offered**
Fall

## Requisites

**Simple Requisites**

**Recommended concurrent or previous courses**
**Type**
Corequisite

Take WLD-121AB

Take WLD-121AB;

# WLD131 - GTAW (TIG) Plate

## Overview

**Course Description**
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.

## Credit Hours

4

**Course Typically Offered**
Fall, Spring

## Student Learning Outcomes

**Objectives**
Identify different types of metals and materials by appropriate methods.

**Objectives**
Demonstrate the use of GTAW electrode classification in compliance with AWS for the selection of electrodes.

**Objectives**
Perform a groove weld in accordance with AWS code.

**Objectives**
Perform a Fillet weld in accordance with AWS code.

**Objectives**
Demonstrate safe equipment setup, operation, and shut-down practices according to manufacturer's recommendations.

**Objectives**
Select appropriate welding procedure, equipment, and rods for specific inert gas welding applications.

**Objectives**
Set up inert gas welding machines using all applicable safety procedures.

**Objectives**
Perform inert gas welding procedures including electrode selection, amperage adjustments, joint selection and preparation for specific applications.

**Objectives**
Perform (TIG) GTAW welding in flat, horizontal, vertical, and overhead positions.

**Objectives**
Identify different types of metals and materials by appropriate methods.

## WLD132 - GTAW (TIG) Plate/Pipe

### Overview

**Course Description**
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.

### Credit Hours

3

**Course Typically Offered**
Spring

### Requisites

**Simple Requisites**

**State prerequisite**
**Type**
Prerequisite

Take WLD-131

Take WLD-131(S23306);

## WLD141 - Symbols and Specifications

### Overview

**Course Description**
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.

### Credit Hours

3

**Course Typically Offered**
Fall, Spring

### Student Learning Outcomes

**Objectives**
Perform welds in various positions using GTAW (TIG) fillet and groove welds using various prescribed electrodes.

**Objectives**
Identify and read welding symbols.

**Objectives**
Identify and explain various lines, notes, and specifications on a blueprint.

**Objectives**
Identify the different types of lines on a blueprint.

**Objectives**
Interpret destructive testing symbols and their methods.

**Objectives**
Interpret non-destructive testing symbols and their methods.

**Objectives**
Develop a working sketch.

## WLD151 - Fabrication I

### Overview

**Course Description**
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.

### Credit Hours

4

**Course Typically Offered**
Fall, Spring

### Requisites

**Simple Requisites**

**Prerequisite**
**Type**
Prerequisite

Take 1 group; Take WLD-110 & WLD-115; Take WLD-110 & WLD-121; Take WLD-110 & WLD-131;

Take 1 group; # Take WLD-110(S23303) WLD-115(S23304); # Take WLD-110(S23303) WLD-121(S23305); # Take WLD-110(S23303) WLD-131(S23306);

## Student Learning Outcomes

**Objectives**
Create a bill of materials from a blueprint.

**Objectives**
Demonstrate the ability to perform measuring and layout activities.

**Objectives**
Learn how to safely operate band saws, ironworkers, drill presses, sheet metal shears, slip rollers, sheet metal brakes, and other fabrication equipment used in industry.

**Objectives**
Learn how to identify various material handling equipment and apply the skills necessary to safely use material handling equipment.

# WLD215 - SMAW (stick) Pipe

## Overview

**Course Description**
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.

## Credit Hours

4

**Course Typically Offered**
Spring

## Requisites

**Simple Requisites**

**State prerequisite**
**Type**
Prerequisite

Take One: WLD-115 or WLD-116

Take WLD-115(S23304) or WLD-116;

## Student Learning Outcomes

**Objectives**
Develop the ability to safely operate welding and fabrication equipment.

**Objectives**
Select appropriate welding procedure, equipment, and rods for specific applications.

**Objectives**
Set up electric arc welding machines using all applicable safety procedures.

**Objectives**
Perform proper material layout and joint preparation.

**Objectives**
Perform single-v groove welds in the 1G, 2G, 5G, and 6G weld positions on carbon plate with prescribed electrodes.

# WLD251 - Fabrication II

## Overview

**Course Description**
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.

## Credit Hours

3

**Course Typically Offered**
Spring

## Requisites

**Simple Requisites**

**State prerequisite**
**Type**
Prerequisite

Take WLD-151

Take WLD-151(S22456);

### Student Learning Outcomes

**Objectives**
Perform fillet and single-v groove welds on carbon pipe.

**Objectives**
Develop the ability to perform advanced measuring and layout activities.

**Objectives**
Demonstrate safe and proper operation of welding and fabrication equipment in accordance to manufacturer's recommendations

## WLD261 - Certification Practices

### Overview

**Course Description**
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.

### Credit Hours

2

**Course Typically Offered**
Fall, Spring

### Requisites

**Simple Requisites**

**State prerequisite**
**Type**
Prerequisite

Take All: WLD-115, WLD-121, and WLD-131

Take WLD-115(S23304) WLD-121(S23305) WLD-131(S23306);

### Student Learning Outcomes

**Objectives**
Practice safe and proper techniques to fabricate projects from working drawings.

**Objectives**
Perform welds according to industry based certification tests using pre-qualified weld joint designs.

**Objectives**
Learn proper welding techniques and learn how to correct improper techniques when welding industry based certification tests.

## WLD262 - Inspection & Testing

### Overview

**Course Description**
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.

### Credit Hours

3

**Course Typically Offered**
Fall, Spring

### Student Learning Outcomes

**Objectives**
Use codes and proper testing symbols to perform welding test.

**Objectives**
Discuss shop safety with regards to testing methods.

**Objectives**
Demonstrate proper method to use dye penetrant.

**Objectives**
Demonstrate proper use of magnetic particle testing.

**Objectives**
Demonstrate ability to visually inspect weld quality and tolerances.

**Objectives**
Demonstrate destructive testing methods on pipe and plate.

**Objectives**
Demonstrate use and calibration of equipment.

**Objectives**
Demonstrate the use of weld quality gauges and tools.

# WLD265 - Automated Welding/Cutting

## Overview

**Course Description**
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.

## Credit Hours

4

**Course Typically Offered**
Fall, Spring

## Requisites

**Simple Requisites**

**State prerequisite**
**Type**
Prerequisite

Take All: WLD-110 and WLD-121

Take WLD-110(S10913) WLD-121(S13138);

## Student Learning Outcomes

**Objectives**
Use codes and proper testing symbols to perform welding test.

**Objectives**
Identify safety requirements with regards to automated welding and cutting processes.

**Objectives**
Demonstrate how to safely cut metal using automated cutting equipment

**Objectives**
Demonstrate how to safely operate automated welding equipment