

2015-2016

# Catalog

## and Student Handbook



Rowan-Cabarrus Community College

# Rowan-Cabarrus Community College

## Directory

### General College Information

Phone: 704-216-RCCC (7222)

Hours of Access:

Mon. – Thurs.: 7:30 a.m. – 8 p.m.

Fri. 7:30 a.m. – 5 p.m.

An automated attendant is available after hours. See the college website for campus directory of specific Rowan-Cabarrus phone listings.

### College Mailing Address:

Rowan-Cabarrus Community College  
P.O. Box 1595  
Salisbury, N.C. 28145

### College Package Delivery:

(Unless specified otherwise)

Rowan-Cabarrus Community College  
1531 Trinity Church Rd.  
Concord, NC 28027

### College Internet Address:

[www.rccc.edu](http://www.rccc.edu)

### Locations:

#### North Campus

1333 Jake Alexander Boulevard., Salisbury, NC 28146

#### South Campus

1531 Trinity Church Road, Concord, NC 28027

#### Cabarrus Business and Technology Center

660 Concord Parkway Drive, Concord, NC 28027

#### North Carolina Research Campus

399 Biotechnology Lane, Kannapolis, NC 28081

#### West Avenue Campus

120 West Avenue, Kannapolis, NC 28081

*All Campus Locations are Tobacco Free.*

# Rowan-Cabarrus Community College

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# Academic Calendar

## Fall Semester 2015

Aug. 17	M	Classes Begin for 16-Week Classes and 1st 8-Week Classes
Sept. 7	M	Labor Day Holiday*
Oct. 9	F	Classes End for 1st 8-Week Classes
Oct. 12-14	M-W	Student Break Days
Oct. 19	M	Classes Begin for 2nd 8-Week Classes
Nov. 11	W	Veterans Day Holiday*
Nov. 25	W	Student Break Day
Nov. 26-27	TH-F	Thanksgiving Holidays*
Dec. 16	W	Classes End for 16-Week Classes and 2nd 8-Week Classes
Dec. 21-31	M-TH	Winter Holidays*

## Spring Semester 2016

Jan. 1	F	New Year's Holidays*
Jan. 11	M	Classes Begin for 16-Week Classes and 1st 8-Week Classes
Jan. 18	M	Martin Luther King, Jr. Holiday*
Mar. 4	F	Classes End for 1st 8-Week Classes
Mar. 7-11	M-F	Spring Break Days - College Closed
Mar. 16	W	Classes Begin for 2nd 8-Week Classes
Mar. 25	F	Spring Holiday – College Closed
May 10	T	Classes End for 16-Week Classes and 2nd 8-Week Classes
May 14	S	Graduation

## Summer Semester 2016

May 18	W	Classes Begin for 10-Week Classes and 1st 5-Week Classes
May 30	M	Memorial Day Holiday*
July 4	M	4th of July Holiday*
July 28	TH	Classes End for 10-Week Classes and 2nd 5-Week Classes

## Disclaimer Statements for Calendars

\*Rowan-Cabarrus is closed on holidays listed above.

The calendar is subject to change. For the most current version, consult the online calendar at:

College Course Advisement Weeks and Registration dates for each term will be announced in the Rowan-Cabarrus Student Planner

Spring Break Days will be used as make-up days for inclement weather, if necessary.

# General Information



# General Information

Rowan-Cabarrus Community College reserves the right to change its regulations, policies, fees and programs without notice.

## Equal Opportunity/Affirmative Action

Rowan-Cabarrus Community College is an equal opportunity institution. All programs, activities and facilities are available to all on a non-discriminatory basis, without regard to race, color, religion, gender, sexual orientation, age, handicap, or national origin. The College provides access, equal opportunity and reasonable accommodation in services, programs, activities, education and employment for individuals with disabilities. Reasonable accommodations will be provided to individuals with disabilities upon request, in advance of the event.

## Open Door Policy

Rowan-Cabarrus Community College has an open-door admission policy for applicants who are high school graduates, are at least 18 years of age or whose admission eligibility conforms to North Carolina law and North Carolina Community College system directives. The Board of Trustees reserves the right to amend the local admissions policy within the parameters permitted by the state of North Carolina and the State Board of Community College Code. Admission to the college is open without regard to race, creed, disability, national origin, gender, sexual orientation or age to any student who meets the age or graduation requirements.

Some degree programs have specific requirements for admission. Information about specific requirements can be found on the college website, or by contacting the Navigation Station at 704-216-7222.

## Tuition

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

## Accreditation

Rowan-Cabarrus Community College is accredited by the Southern Association of Colleges and Schools Commission on Colleges to award associate degrees, diplomas and certificates. Contact the Commission on Colleges at 1866 Southern Lane, Decatur, Georgia 30033-4097 or call 404-679-4500 for questions about the accreditation of Rowan-Cabarrus Community College. For additional information, please visit the Rowan-Cabarrus website at: <http://www.rccc.edu/president/accreditation/>

## Consumer Information

In compliance with federal law this information can be located on the college website: [www.rccc.edu](http://www.rccc.edu).

## Board of Trustees

Carl M. Short, Jr., Chair	Lynn G. Marsh
Cynthia L. Mynatt, Vice Chair	Robert S. Misenheimer
Dr. Carol S. Spalding, President	Stephen M. Morris
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J. Thomas Bost	Quentin Woodward, Jr.
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Darise D. Caldwell	<i>Government Association</i>
R. Daryl Cox	<i>President</i>
Patricia G. Fulcher	
Patricia K. Horton	

## Administration

Dr. Carol S. Spalding..... College President

Dr. Michael Quillen.... Vice-President of Academic Programs

Craig Lamb ..... Vice-President of Corporate and Continuing Education

Gaye McConnell .... Vice-President Enrollment Management and the Student Experience

Ken Ingle..... Chief Information Officer

Carla Howell..... Chief Officer of Governance, Foundation and Public Relations

Janet Spriggs..... Chief Financial Officer

Jonathan Chamberlain ..... Chief Officer of Facilities Services

Tina Haynes ..... Chief Officer of Human Resources and Organizational Effectiveness

Mark Ebersole ..... Associate Vice-President, Enrollment Management and Student Services

Angelo Markantonakis ..... Associate Vice-President, Academic Programs

Dr. Van Madray ..... Dean of Engineering and Business Technologies

Wendy Barnhardt ..... Dean of Health and Public Services

Dr. Carol Scherczinger ..... Dean of Science, Biotechnology, Mathematics and Information Technologies

Claudia Swicegood..... Dean of Special Projects

Dr. Carol Holbert ..... Dean, Department of Liberal Arts, and General Education

Gary Connor ..... Executive Director of Pre-College Studies

Ann Morris ..... Associate Vice President of Corporate and Continuing Education

Debra NeeSmith..... Dean of Educational Resource Services

Spencer Rummage..... Dean of Public Services Technologies

# 2015-2018 Rowan-Cabarrus Strategic Plan

## Mission

Rowan-Cabarrus improves lives and builds community through public higher education and workforce development.

## Values

We are committed to our college and our community through our values:

- Excellence and innovation in education and workforce training;
- Continuous improvement through lifelong learning and achievement;
- Trust, integrity, inclusiveness, and mutual respect;
- Exemplary service through team work;
- Responsibility, sustainability, accountability;
- Leadership, partnership and global citizenship.

## Goals

- Prepare students for careers and opportunities that stimulate sustainable economic and workforce development.
- Foster a culture of learning that inspires academic excellence and promotes student success.
- Provide excellent service to current and prospective students, colleagues, businesses, industries, and the community.
- Acquire, develop, and manage human, fiscal, and physical resources essential to the development and delivery of technology-enriched, high value education and service.
- Serve as a catalyst for advancing the region.

[www.rccc.edu/effectiveness/rowan-cabarrus-community-college-strategic-plan-2015-2018/](http://www.rccc.edu/effectiveness/rowan-cabarrus-community-college-strategic-plan-2015-2018/)

## History of the College

The need for a technical education center was recognized in 1960, when Salisbury-Rowan community leaders, working through the chamber of commerce, conducted a survey of manpower requirements in the area. Results of the survey provided the basis for their request that the State Board of Education establish an industrial education center in Rowan County. The people of Rowan County gave strong support to the idea by approving a \$500,000 bond issue to purchase land and to finance construction of the first building. When the center first opened its doors in 1963, it offered seven pre-employment education programs and a variety of short courses for adults.

In 1964, the school was designated Rowan Technical Institute under the provisions of the Community College-Technical Institute Act. This made it possible to expand the school's curricula.

In 1979, the General Assembly passed a bill which recognized the synonymous nature of the terms "institute" and "college." After appropriate action by the Board of Trustees and the Rowan County Commissioners, the North Carolina State Board of Education officially approved the name of Rowan Technical College.

In 1988, the trustees of the college voted to change the name of the institution to Rowan-Cabarrus Community College to more accurately reflect the comprehensive nature of its programs and the service area. The college became the first multi-campus institution in the state in 1991 when the South Campus opened its doors.

The college has experienced considerable growth since 1963, and now enrolls an average of 20,000 citizens annually. Today, Rowan-Cabarrus Community College prepares individuals for careers in approximately 50 programs of study in business, health and public services, and industrial and engineering technologies. The college also offers the Associate in Arts, Associate in Fine Arts and Associate in Science degree programs for those students who intend to transfer to a four-year college or university.

Rowan-Cabarrus serves the residents of Cabarrus and Rowan counties at four campus locations (North, South, Cloverleaf Plaza and Cabarrus Business and Technology Center), multiple centers, and through online programs. In 2010, Rowan-Cabarrus opened a 62,000-square-foot classroom and laboratory building at the North Carolina Research Campus, in Kannapolis.

At the same time, a new 38,000-square-foot classroom building opened at the North Campus. This was Rowan-Cabarrus' first LEED building and the first completely new facility built on the North Campus in more than 30 years. The building is LEED Gold certified, a leader in its own right as the first LEED Gold building in Rowan or Cabarrus counties and the fourth in the NC Community College system.

In November 2010, Rowan County citizens approved a \$12 million bond referendum for capital improvement projects on the North Campus as a commitment to keep the college facilities updated to provide the highest quality and relevant instruction and training for our communities. These renovations are ongoing on the North Campus through 2015.



# Program/Services Overview



# Programs and Services Overview

## Business, Engineering, Health, Public Services and Technical Programs: (A.A.S. or Associate in Applied Sciences)

The North Carolina Community College System (NCCCS) has offered two-year degree, diploma and certificate programs for individuals whose career goals are to immediately enter the workforce in their chosen profession or trade. The program offerings in the Associate in Applied Sciences provide education and training in current and emerging careers in our regional service area and beyond. Some of the A.A.S. programs have established articulation agreements with private and public universities which accept some courses toward an undergraduate degree.

## Transfer Programs:

Rowan-Cabarrus offers three transfer program areas: Associate of Arts (A.A.), Associate of Fine Arts (A.F.A.), and Associate of Science (A.S.). The transfer programs offer degree completing students the opportunity to transfer 60 - 61 credit hours to the University of North Carolina system member institutions. See Comprehensive Articulation Agreement section

Transferring to private universities or to colleges and universities outside of North Carolina requires additional research and planning by students while enrolled at Rowan-Cabarrus to ensure the best possible credit transition.

## Associate in General Education:

The Associate in General Education (A.G.E.) is a degree program designed for students who want additional flexibility in designing a degree program to meet their educational and academic needs. The A.G.E. is not a transfer degree option, but some individual courses may be received by senior institutions if a student is interested in transferring. Pre-health students are assigned in this major until formally admitted to a health program.

## Comprehensive Articulation Agreement:

The Comprehensive Articulation Agreement became effective in 1997 and was revised in 2014. Students entering fall 2014 semester or later will follow the 2014 Comprehensive Articulation Agreement while transfer students enrolled before 2014 may elect to graduate under the 1997 criteria. This agreement addresses the transfer of credits between institutions in the North Carolina Community College System and from that system to constituent institutions of the University of North Carolina. Community college graduates of the A.A. and A.S. programs who have completed the general education transfer core will be considered to have fulfilled the institution wide, lower division general education requirements of receiving institution.

## Academic and Career Advising Centers (ACA Centers):

ACA Center academic advisors are available on both North and South campuses to assist students with their educational planning. ACA Center advisors are dedicated to providing quality advising in an environment that is welcoming, professional, and supportive. Academic Advising is a cooperative effort between the student and the advisor that is an ongoing and developmental process, which may extend well beyond course planning and selection. While the ultimate responsibility for exploring choices and making decisions rests with the student, the ACA Advisors are committed to facilitating this process so students can develop an educational plan, set career goals and achieve personal growth. For additional information, please visit the Rowan-Cabarrus website at: <http://www.rccc.edu/aca/>.

## Adult Studies:

An important function of the College is to provide educational programs on the pre-college level. Pre-college Studies offer adults the opportunity for meaningful social and occupational growth through Adult Basic Education (ABE), High School Equivalency Program (HSE, formerly GED) and English as a Second Language (ESL) program. For additional information, please visit the Rowan-Cabarrus website at: <http://www.rccc.edu/precollege/>.

## Career and College Promise Program:

The Career and College Promise Program (CCP) allows qualified high school students to earn college credits toward a transfer degree or a technical education degree. The program has specific admission criteria and specific courses for program completion. High school students who are interested in this opportunity must consult with their high school counselor or, if in an approved homeschool, the student and principal may consult with the director of admissions and enrollment management. For additional information, please visit the Rowan-Cabarrus website at: <http://www.rccc.edu/ccp>.

## Corporate and Continuing Education Programs:

At Rowan-Cabarrus Community College, Corporate and Continuing Education programs support the philosophy that learning is a lifelong activity. This division offers courses for professional and job skills development and personal enrichment courses of general interest at convenient times and locations. The Corporate and Continuing Education Division supports individual, organizational, and economic development by providing career-focused, educational programs and services to citizens and employers of Rowan and Cabarrus counties. For additional information, please visit the Rowan-Cabarrus website at: <http://www.rccc.edu/corporatecontinuing/>.

## Counseling Services:

Professional counseling services are provided to students, prospective students, and the entire college community in the areas of academic, career, disability services, and personal counseling. Counseling services are confidential. Consistent with the College's mission, counseling services focus on promoting student success, retention and individual growth. For additional information, please visit the Rowan-Cabarrus website at: <http://www.rccc.edu/counseling/>.

Career Services provide career counseling to students and potential students; provide tools and information for students to be successful in their job search in the way of resume reviews, interview feedback, and labor market information. This department offers individual and group career counseling and other career exploration tools to help students make decisions about their education and career path. Career counselors encourage students to look inward and learn more about themselves in order to venture outward toward their future. For additional information, please visit the Rowan-Cabarrus website at <http://www.rccc.edu/careerservices/>.

## English as a Second Language (E.S.L.):

ESL is offered as a Pre-College program. Please refer to the Basic Skills section. For additional information, please visit the Rowan-Cabarrus website at: <http://www.rccc.edu/precollege/about-the-english-as-a-second-language-program/>.

## Enrollment and Student Services:

Students can receive information about admissions, registration, general advising assistance, transcripts, financial aid, career counseling, academic counseling, veterans' benefits and graduation through the Navigation Stations at North or South Campus. For additional information, please visit the Rowan-Cabarrus website at: <http://www.rccc.edu/student-services/>.

## Financial Aid/Veteran's Administration Benefits/Federal Student Loans

Rowan-Cabarrus offers many types of financial assistance including federal and state grants, federal student loans, federal work study and institutional scholarships. Initially, students should complete the federal financial aid application at: [www.fafsa.gov](http://www.fafsa.gov) to be considered for financial assistance.

Veteran's benefits are available for qualified veterans and/or their designated family member. For additional information, please visit the Rowan-Cabarrus website at: <http://www.rccc.edu/financialaid/> or <http://www.rccc.edu/vets/>

## Learning Resource Centers (LRCs):

Learning Resource Centers (LRCs) are essential components of Rowan-Cabarrus Community College. The LRCs provide our patrons with library, audiovisual, Internet and instructional resources and services necessary to support the educational programs of the college. They also provide resources to meet the various needs, interests, and aptitudes of the students enrolled in lifelong learning. LRCs are available at North, South NCRC and CBTC. For additional information, please visit the Rowan-Cabarrus website at: <http://www.rccc.edu/lrc/>.

## Navigation Station:

Navigation Station is more than a place... it's a philosophy. You come to Rowan-Cabarrus Community College to learn and not to run from office to office taking care of the administrative details of your education. The school brings together a host of administrative services under one roof so that you can get back to the business of being a student! Start at the Navigation Station on-campus or online to start your success at Rowan-Cabarrus.

The Navigation Station offers extended hours at both our North and South Campuses to meet your needs. Individual services are scheduled by location. Please check out the website for details: <http://www.rccc.edu/onestop/>.

## Student Government Association/ Student Life:

Student Life is a critical component of the student experience. Student Life at Rowan-Cabarrus continues to flourish with record participation in clubs and activities. Student Life extends beyond the campuses as well. The student life calendar includes service projects, blood drives, legislative visits, leadership conferences, and more. Online publications, social media platforms, and charter bus excursions are available to Rowan-Cabarrus students. The Student Government Association continues to be the official voice through which students' opinions and actions may be carried out. Chartered student organizations allow for student membership in clubs of academic and social interest. For additional information on ways to get involved, please visit the Rowan-Cabarrus website at: <http://www.rccc.edu/studentlife/> or <http://www.rccc.edu/sga/>.

## Small Business Center:

The mission of the Small Business Center (SBC) is to increase the success rate and number of viable small businesses in the community by providing education, counseling, a resource library, and special programs. The SBC offers free two-hour seminars on topics such as business start-up, funding, business plans, marketing, sales, website design, social media and online ventures. More in-depth training and skill building includes courses in basic accounting, QuickBooks and business plan writing. For additional information, please visit the Rowan-Cabarrus website at: <http://www.rccc.edu/sbc/>.

**Testing Centers:**

The Testing Centers at North and South Campus provide comprehensive testing services, including placement testing, High School Equivalency (HSE) testing, academic course testing, CLEP, DSST, and industry specific certifications. The Testing Centers serve as remote test sites for other colleges and universities. Rowan-Cabarrus is also an authorized testing site for Pearson-VUE. For additional information, please visit the Rowan-Cabarrus website at: <http://www.rccc.edu/testing/>.

**Tutoring Centers:**

Tutoring services for students are available on North and South Campuses. Students can receive assistance on English, writing, reading, mathematics, business technology courses, most science classes, including biotechnology and foreign languages. For additional information, please visit the Rowan-Cabarrus website at: <http://www.rccc.edu/tutoring/>.

# Admissions and Enrollment



# General Admission Information

The College and other institutions in the North Carolina Community College System operate under an Open Door policy. In accordance with the State Board of Community College Code, Title 23, Chapter 2(c), Section .0300, the College shall maintain an open-door admissions policy, which accepts applicants who have graduated from high school, hold a GED or adult high school diploma, or are at least 18 years of age. The College also enrolls high school students who are qualified to participate in college courses through the Career and College Promise Program or selected continuing education training courses. The Rowan-Cabarrus Board of Trustees reserves the right to establish local admission policies as authorized within the parameters established by the State Board of Community College Code.

Rowan-Cabarrus offers education and training to meet the needs of the community. Different areas of the College have different admission criteria. Please read the section which applies to your educational interest or contact the Navigation Station for assistance regarding specific criteria.

Individuals seeking accommodations related to enrollment, please refer to the section for Special Students.

## College Degree, Diploma and Certificate Program Admission

The degree, diploma, or certificate programs are taught at a level beyond high school. Therefore, a high school diploma or recognized equivalent is usually the minimal preparation; however, a prospective student may demonstrate their academic readiness through the college placement inventory. If you have not completed high school, the College provides adult studies (HSE) programs through pre-college studies.

In order to assure that your educational experience will be successful; advisors will assist in determining your present academic preparedness for the program you have chosen. The College uses placement tests, academic records, occupational experience and/or other indicators to determine the student's preparedness and potential for success.

If you have not successfully completed all the high school courses needed to succeed in the program of your choice, Rowan-Cabarrus will make the courses available to you. In certain A.A.S. programs, students are enrolled on a space-available basis because laboratory space is limited. Applicants to these programs are encouraged to contact Student Services as soon as possible.

High school seniors should apply early in their senior year. New students are admitted prior to the start of each semester. Qualified students are accepted during each semester's registration, if space is available.

The Basic Law Enforcement Training program and all health programs contain additional admission requirements that must be met before the student is admitted to the program. All admission requirements are listed in special admission section and the online catalog updates.

## Developmental Courses

Developmental courses (designed to improve reading, writing, spelling, mathematics and computer skills) are taught in small classes. If you completed the placement tests and your scores indicate that you needed to refresh your skills, you will need to take some developmental courses. Usually, students who take developmental courses will be advised that they can take one or two of their regular program courses at the same time. Academic advisors will assist you in planning your schedule.

Developmental classes are considered non-credit courses and are not included in the grade point average; however, tuition and fees are charged at the same rate as a credit course. Some college level courses have satisfactory completion of a related developmental course as a prerequisite.

## Online/Hybrid Formats

Students are required to meet academic and skill prerequisites prior to registering for an internet course. Such prerequisites determine student preparedness and support student potential for success in an internet course. Student preparedness includes demonstrated reading, written communication, and technical skills. All internet course, regardless of the curriculum, are reading intensive and writing intensive, and require participants to use a wide variety of computer and internet technology.

## Enrolling is Easy at Rowan-Cabarrus:

- **Apply for Admission:** Once you have made the decision to take classes at Rowan-Cabarrus Community College, apply on-line through College Foundation of North Carolina (CFNC). It takes a minimum of two business days to process your application, depending on the date you apply. Please check the website for admission deadlines.
- By electronically completing and submitting the college application, the student accepts the responsibility to be aware of and follow codes of conduct, behavior standards and all program specific rules, policies and procedures.
- **Official Transcripts\*** Contact the guidance office or registrar's office of your high school and any colleges you have attended and request an official copy of your transcript be sent to:  
Student Services/Records Office  
Rowan-Cabarrus Community College  
P.O. Box 1595  
Salisbury, North Carolina 28145-1595

- o An official transcript is in a sealed envelope, has an embossed seal or original signature, and is usually mailed directly to Rowan-Cabarrus from the institution or may be sent electronically from the institution or transcript service to Rowan-Cabarrus. The graduation date will be posted on all high school transcripts. Public high school graduates are encouraged to request an electronic copy from the College Foundation of North Carolina (CFNC).
- o Home-school graduates should send a final transcript, verifying your graduation, as well as a copy of the letter from the North Carolina Department of Non-Public Instruction acknowledging your home school. Correspondence/online school diplomas will be accepted if they are regionally accredited or accredited by the Distance Education and Training Council (DETC). Any other correspondence/online school diplomas will be reviewed on a case-by-case basis.

- **Placement Testing** is generally required of all students entering a curriculum program at Rowan-Cabarrus. The North Carolina Diagnostic and Placement Tests (NC\_DAP) assess your skills in the fundamentals of English/reading, mathematics, writing, and basic computer skills. Your scores are used to appropriately place you into courses that will enable you to succeed in your college journey. If you are entering a certificate program or taking a specific course of interest, you may not be required to take placement testing, but will be expected to meet all course prerequisites to be eligible to register.

*You may be exempt from testing if you:*

- Have a U.S public high school unweighted GPA equal to or greater than (= or >) 2.6, graduated within five years of your college enrollment, and earned passing grades in four math courses, including Algebra I, Algebra II, Geometry, and a fourth math suitable for college admission.
- Have completed transferable college-level coursework in English and math with a grade of “C” or better. Your official college transcript from the awarding college must be evaluated in order to determine any exemption.
- Achieved SAT scores of Writing (500) OR Critical Reading (500) and Math (500) or ACT scores of Reading (22) OR English (18) and Math (22). Your official scores must be received from the testing agency to determine any exemptions. In addition, the ACT or SAT must have been completed within the previous five years.
- Have received an associate degree, bachelor’s degree or higher from an accredited college or university. Your official college transcript showing the degree awarded must be received and evaluated to determine any exemptions.

You must complete an application for admission prior to testing and have a Student ID number. You will schedule an appointment to take the placement test (English/Reading, Mathematics, and Computer Skills) at [www.rccc.edu/testing](http://www.rccc.edu/testing).

Special accommodations for placement testing due to a disability can be made with Disability Services prior to scheduling a placement test date. Please refer to the “Information about Special Students” section.

If you are an applicant for the Associate Degree Nursing, Practical Nursing, Dental Assisting, Radiography, or Basic Law Enforcement Training programs, please refer to the specific program for required placement scores, remediation, and other criteria used for program admission.

*On Testing Day:*

- Check in with the staff at the Navigation Station on either the North or South Campus area when you arrive.
- Bring a photo ID, such as a Driver’s License, Military ID, State ID Card, or Student ID Card.
- Bring your Student ID Number – You will not be able to test without this number. If you cannot locate your Student ID Number, please ask the Navigation Station staff for assistance.
- Personal calculators are not permitted on the mathematics section of the NC\_DAP. Instead, you will have access to a pop-up calculator for certain math questions.
- There is no time limit to the assessment, so do not rush.
- Remember... you cannot fail. These tests are very important to your course placement, though.
- Your exam session will begin with a brief orientation.
- You will receive your scores immediately following completion of your testing.

## **Residency:**

Student residency status is for tuition purposes and is established by the initial admissions application. The application for the North Carolina Residency can be found on our website at: <http://www.rccc.edu/onestop/492/application-for-north-carolina-residency/>

Appeals related to residency must be issued in writing in the first 10 class days of the semester. You can find more information related to our Residency Appeals Process at: <http://www.rccc.edu/onestop/457/residency-appeals-process/>

## Out-of-State Student

A student who is determined to be a nonresident of North Carolina is subject to a significantly higher tuition charge than a resident. An initial residency decision is made at the point of application to Rowan-Cabarrus. A student who is determined to be a nonresident based on information provided on the application may apply to have their status reviewed by completing the North Carolina Residence and Tuition Status Application. This application must be submitted no later than 10 business days after the first day of classes for the semester the student wishes their status to be reviewed. For more information on Out-of-State Residency Criteria please see our website at: <http://www.rccc.edu/onestop/455/in-state-and-out-of-state-residency-criteria/>. Tuition rates are subject to change by action of the North Carolina General Assembly.

## International Admissions

Rowan-Cabarrus Community College provides educational opportunities for individuals who may not be citizens or residents of our regional service area. This school is authorized under Federal law to enroll non-immigrant students. Non-immigrant students will be accepted to begin classes in the fall semester only. To be considered for admission, an international student must present the following information to admissions:

- A completed application, received no later than June 15 of the admission year.
- Forward a certified copy of his/her official high school diploma, transcript from all high schools and post-secondary institutions the student has attended, and official U.S. educational evaluation of the documents. All transcripts from schools outside the United States must be evaluated by a reputable evaluation service. A list may be obtained in Student Services.
- Original financial documents are required along with a statement of financial support from the student's sponsor, and a statement from the sponsor's bank that there are sufficient funds, \$20,500 U.S. dollars, to support the student. If there is no sponsor, an original and official document that shows the student has on deposit sufficient funds to support his/her tenure as a student (\$20,500/year U.S. dollars).
- A minimum score of 500 on the Test of English as a Foreign Language (TOEFL) or a minimum score of 173 on the computerized version, or a minimum Internet Based Test (IBT) score of Reading 17, Listening 17, Speaking 16, and Writing 16. If any single score falls below the minimum, the IBT will not be considered. All scores must be received as official documents. No copies of scores will be accepted. TOEFL test scores must be within two years of the date of admission.

- After all required documentation has been received by deadline, and after approval by the Director of Admissions and Enrollment Management, the applicant may be issued his/her I-20.
- After applicant has received the appropriate visa allowing him/her to enter the U.S., he/she must present evidence of medical insurance coverage prior to registration.

NOTE: Rowan-Cabarrus does not have scholarship or loan funds for international students available at this time. The college does not provide dormitory facilities.

## State Authorization

Admission of applicants residing outside of North Carolina is dependent on the college's ability to secure authorization from the state in which the applicant is currently residing. For more information, please visit our [state authorization website](#).

# Admission of High School Students through Career and College Promise

## College Transfer and Career Technical Pathways

Currently enrolled high school students who wish to take college courses through Rowan-Cabarrus may participate in Career and College Promise Program. To participate in this program the high school student must begin the process through their high school guidance counselor or approved homeschool principal. Students must select one of two College Transfer Pathways or may select a Career Technical Certificate Pathway.

To qualify for a College Transfer Pathway, a student must demonstrate college readiness in English, mathematics and reading using an approved assessment. They must also have a 3.0 or higher grade point average on their high school courses and continue to make progress towards graduation.

To qualify for a Career Technical Certificate Pathway, a student must have a 3.0 or higher grade point average or a 2.6 grade point average and a recommendation from a high school official.

Career and College Promise students may take one or two courses each semester as long as they have met the course prerequisites. Developmental courses are not available to high school students.

Career and College Promise Program students are subject to the same criteria for academic probation as traditional college students.

For additional information, please visit the Rowan-Cabarrus website at:  
<http://www.rccc.edu/highschool/careercollegepromise/>

## Early college at Rowan-Cabarrus

Early college is an educational partnership between Rowan-Cabarrus and school districts in Rowan and Cabarrus counties. This partnership provides high school students an opportunity to earn both high school and college credits during four years of enrollment in an early college program. By earning enough credits, a graduating high school senior could exit high school with an associate degree and be ready for workforce employment or transfer to a four-year college or university. The student must enroll as a high school freshman to pursue this opportunity. College tuition for early college students is waived. Early college programs are administered by the local educational agency (school district), but housed on the college campus. To learn more information about early college opportunities in Rowan County, Cabarrus County or Kannapolis City Schools, please contact these school districts.

## Registration

The traditional college curriculum operates on the semester system and uses an online class scheduling tool known as WebAdvisor. All students enrolled in programs are expected to register using WebAdvisor. Registration dates can be found on the College website at <https://www.rccc.edu/recordsregistration/webadvisor-registration-dates/>. We encourage students to meet with faculty advisors prior to registering for classes to assure students have developed the educational plan for their program of study. Registration is completed by paying the required tuition and fees for the courses scheduled. Please refer to the section on tuition and fees.

## Schedule Changes

Students may make changes to their course schedule at any time during the scheduled registration dates. Once the semester begins, students who are registered for credit courses as of the first day of any semester, can make schedule changes as follows; 1) the first two days of fall and spring semesters; and 2) the first day of summer term. Schedule changes may be made by the student using the WebAdvisor tool or by seeing a faculty/program advisor.

# General Admission Information for Corporate and Continuing Education

<http://www.rccc.edu/corporatecontinuing/>

Corporate and Continuing Education offers coursework in the following areas: Adult Basic Education, S.O.A.R., Human Resources Development (HRD), personal enrichment and workforce development. Below are the general requirements for admission and registration to each area in Corporate and Continuing Education. Individuals seeking accommodations should refer to the Special Students section.

## Adult Basic Education Courses

Adult Basic Education consists of courses and laboratory work to prepare students to be successful in their effort to continue their education. Incoming students must be at least 18 year old. Minors (age 16 or 17) may be enrolled on a “space available” basis only and with the director’s approval. People seeking admission to enter the Adult Basic Education program must contact the Pre-college Studies office (704-216-3510) to get specific enrollment information. Those under age 18 must receive and complete an enrollment packet before meeting with the director of Pre-college Studies for approval to begin coursework.

## English as a Second Language (ESL):

ESL classes are designed especially for adults whose native language is not English and who want to improve their English. Instruction is offered in listening, speaking, reading and writing. ESL classes are provided on campus, in the community and in workplace settings.

For more information, please contact Salisbury Campus: Jim Price (704) 216 7247 or [jim.price@rccc.edu](mailto:jim.price@rccc.edu)

## Human Resources Development:

If you need to receive further training to successfully enter the workforce or to apply for a different job, the Human Resources Development (HRD) program provides short-term pre-employment training and counseling designed for the unemployed or underemployed adult. Training includes:

- Learning how to find a job
- Building skills necessary for obtaining employment
- Exploring various career options
- Learning basic computer skills, including computerized job searching
- Improving reading, math, and locating information skills
- Earning a career readiness certification

Tuition for these classes will be waived for the unemployed or underemployed student.

For additional information, please contact Molly Cline (704-216-3511 or [molly.cline@rccc.edu](mailto:molly.cline@rccc.edu)) or visit the Rowan-Cabarrus website at <http://www.rccc.edu/hrdevelopment>.

## Personal Enrichment

Personal enrichment courses are offered throughout the year in all areas of interest ranging from computer skills courses to physical fitness and wellness courses. Most of these courses have no admission criteria. People interested in taking these courses may register by contacting the Navigation Station for additional information about the dates, times, locations and costs associated with these courses. Registration and payment is available online through WebAdvisor. This link is located on the top right of our website, <http://www.rccc.edu/>. For additional information, please visit the Rowan-Cabarrus website at: <http://www.rccc.edu/enrichment/>

## S.O.A.R. (Skills, Opportunity, Awareness and Readiness)

S.O.A.R. (Formerly known as Compensatory Education) is specifically designed to meet the needs of adults with intellectual disabilities. Students in this program must be at least 17 years old. The purpose of the program is to compensate adults with intellectual disabilities for the lack of, or inadequate, education received earlier. The focus of the S.O.A.R. program is on helping the individual become as independent as possible through acquiring basic and life skills needed to function successfully in daily living

Eligibility Criteria: To be eligible to participate in the S.O.A.R. program, an individual must be 17 or older, and (a) high school graduate (O.C.S.) or (b) must complete an Intake interview and assessment. Students must be able to be tested, must adhere to the college Code of Conduct, and must be able to perform activities of daily living (or be accompanied by an approved one-on-one assistant).

Classes are offered at no cost to the student and are currently held at the North Campus in Rowan County and at the South Campus in Cabarrus County and at other off-campus locations. Admission and enrollment in this program are limited.

For more information, contact:  
 Salisbury Campus: Jay Taylor (704) 216 7116 or [jay.taylor@rccc.edu](mailto:jay.taylor@rccc.edu)  
 Concord Campus: Barbara Beach (704)-216-3508 or [Barbara.beach@rccc.edu](mailto:Barbara.beach@rccc.edu)

### Workforce Development Courses

Corporate and Continuing Education offers a wide variety of workforce development courses to individuals and to employers for their incumbent workforce. Many of these courses provide not only continuing education credit, but also certification at local, state or national levels. Some examples of courses in this area are: CPR, Certified Nursing Assistant, EMT, Fire Safety, Law Enforcement certification and recertification, leadership development, customer service, project management, and Lean/Six Sigma.

Courses are offered throughout the year. Some courses have prerequisite training or certification which must be met before enrollment. Please check the College website or. For additional information, please contact the Navigation Station for the most current information related to the specific course or visits the Rowan-Cabarrus website at: <http://www.rccc.edu/corporatecontinuing/>

Tuition and fees for these courses are also variable.

## Tuition and Fees

All students are now able to pay tuition and fees through WebAdvisor

### Tuition, Fees and Related Costs – Curriculum Courses

Tuition and fees are set by the North Carolina State Board of Community Colleges and the General Assembly and are subject to change. Any changes will be announced by the NCGA in July of each year and will be effective beginning each fall semester. Tuition and fees are due at each registration period by the payment date listed for each registration period. Please visit the college website for payment due dates: <http://www.rccc.edu/recordsregistration/web-advisor-registration-and-web-support-schedule/>.

### Tuition

Because the state helps pay the tuition of North Carolina residents out of tax dollars, tuition for North Carolina residents is \$72.00 per credit hour, up to and including 16 credit hours. There will be a maximum charge of \$1,152.00 per semester. Tuition for non-resident students is charged at the rate of \$264.00 per credit hour with a maximum charge of \$4,224.00 per semester. The College accepts American Express, Discover, MasterCard, VISA credit cards for registration payment. For current tuition rate information, please refer to: <http://www.rccc.edu/onestop/466/tuition-and-fees-for-academic-programs/>

#### 2014-2015 Tuition Rates

North Carolina Residents:		Non-Resident Students:	
Credit Hour	Tuition	Credit Hour	Tuition
1	\$ 72.00	1	\$ 264.00
2	\$ 144.00	2	\$ 528.00
3	\$ 216.00	3	\$ 792.00
4	\$ 288.00	4	\$1,056.00
5	\$ 360.00	5	\$1,320.00
6	\$ 432.00	6	\$1,584.00
7	\$ 504.00	7	\$1,848.00
8	\$ 576.00	8	\$2,112.00
9	\$ 648.00	9	\$2,376.00
10	\$ 720.00	10	\$2,640.00
11	\$ 792.00	11	\$2,904.00
12	\$ 864.00	12	\$3,168.00
13	\$ 936.00	13	\$3,432.00
14	\$1,008.00	14	\$3,696.00
15	\$1,080.00	15	\$3,960.00
16	\$1,152.00	16	\$4,224.00

Tuition rates are subject to change by action of the General Assembly. Decisions regarding this change may not be in effect prior to publication of this catalog.

A resident student is generally defined as one whose legal residence has been in North Carolina for at least 12 months before enrollment or re-enrollment in the college.

### Senior Citizens (age 65 and older)

Senior citizens will be charged tuition and fees as any other regularly enrolled student.

## Fees

### Electronic Textbook (eText) Fee

Some courses have an e-Text fee attached to the course at the time of registration. The fee is mandatory and the e-Text is automatically delivered to the student's Blackboard account at the beginning of the course. For more information on e-textbooks fees, see [www.rccc.edu/etexts](http://www.rccc.edu/etexts).

### Campus Access Fee

All students pay a campus access flat fee of \$20.00 per semester/term which supports parking, security systems, student accident insurance, remote notification and public safety infrastructure, and other enhancements of access to college facilities. This fee is refundable only if the student completely drops all courses by the refund deadline as published in the Academic Calendar.

### Technology Fee

Students at Rowan-Cabarrus Community College pay a technology fee for each of the fall and spring semesters, and summer term. Technology fees cover the cost of instructional supplies, materials, computers and other technology support. Technology fees are charged on a pro-rata basis depending on the number of credit hours for which the student is enrolled as follows:

7+ credit hours ..... \$ 25.00 per semester  
 1-6 credit hours ..... \$ 12.50 per semester

### Student Activity Fee

Students at Rowan-Cabarrus are required to pay a \$32.00 activity fee for fall and spring semesters (regardless of the number of credit hours enrolled). This fee covers student activities coordinated by the Student Life Department and the Student Government Association (SGA). Students pay a \$13.00 activity fee for summer term, regardless of the number of credit hours for which the student is enrolled.

### Graduation Fee

Curriculum students will pay a \$5.00 fee each semester per graduate, regardless of participation in the ceremony, to offset the costs of degree, diploma, or certificate production and diploma cover, as well as cover the cap and gown cost for the ceremony. This fee is non-refundable. GED graduates will be charged a graduation fee if they participate in the ceremony.

### Lab Fee

Curriculum students will pay a lab fee for courses that have an associated lab. The fee will range from \$5.00 to \$30.00.

### Professional Liability Insurance

Cosmetology, Early Childhood Education, Dental, Nursing, Radiography students are required to purchase student professional liability insurance which is available for approximately \$13.00 per year. Students in Continuing Education courses which require patient care or direct client service are also required to have professional liability insurance. The Rowan-Cabarrus Cashier's Office can provide additional information about this fee.

### ART/Photography Fee

ART 261 – Photography I has a material fee of \$251.00 to cover expenses including, but not limited to: Film, printing paper, chemistry and facility rental. The ART 261 course is held in the Linn-Norvell Darkroom and the adjacent Graham Studio at Waterworks Visual Arts Center in Salisbury. This course fee covers student materials that are required of all students enrolled in this course. Students are not required to purchase textbooks for the course. The supplies provided are approved by the faculty and supplied by Waterworks.

### Ceramics Fee

ART 283 has a course fee of \$271.50 to cover the cost of facility usage and materials. The ART 263 course is held in the Clay Studio and Glazing Room at the Waterworks Visual Arts Center in Salisbury. This course fee covers student materials that are required of all students enrolled in this course. Students are not required to purchase textbooks for the course. The supplies provided are approved by the faculty and supplied by Waterworks.

### MSM/Motorsports Fee

Students choosing to enroll in specific MSM courses located in SMP will incur an additional \$80 lab fee to cover off-campus industry facility experience.

### Official Transcript Fee

Rowan-Cabarrus Community College in partnership with SCRIP-SAFE International provides twenty-four hour access to online transcript ordering through a secure website. This process is completely secure and can be delivered to your intended recipient by mail and/or electronically.

You will pay for your transcript through SCRIP-SAFE

at the time of ordering, via credit card and they accept Visa, MasterCard, American Express and Discover. The most current security available is used to protect your credit card and personal information. For additional information refer to the College website at <https://www.rccc.edu/onestop/626/transcript-request-form/>.

### Retest Fee

Students choosing to retest will pay a fee to cover at minimum the actual cost of the test. The cost will vary depending on the test or inventory type. A minimum fee of \$5.00 will be charged for each retest session. This fee does not apply to high school equivalency testing/ retesting. This fee is non-refundable.

### Nursing Testing Fee

All nursing students are required to pay a fee for testing services. This fee is billed for the NUR course at the time of registration. Please refer to the individual Nursing Programs of Study for estimated program costs by semester.

### Tuition Refund Policy

Tuition, as well as the refund policy, are set by the North Carolina State Board of Community Colleges and the General Assembly, and are subject to change. Tuition refund policy states:

- A 100 percent refund shall be made if the student officially withdraws prior to the first day of class(es) of the academic semester or term as noted in the academic calendar.
- A student is eligible for a 100 percent refund if the class in which the student is officially registered is cancelled due to insufficient enrollment.
- A 75 percent refund shall be made if the student officially withdraws from the class(es) prior to or on the official 10 percent point of the semester.
- For classes beginning at times other than the first week (seven calendar days) of the semester a 100 percent refund shall be made if the student officially withdraws from the class prior to the first class meeting. A 75 percent refund shall be made if the student officially withdraws from the class prior to or on the 10 percent point of the class.

Official withdrawal for a refund involves completing the proper online withdrawal drop form (<http://www.rccc.edu/onestop/online-drop-form>) prior to or on the “10 percent” point of the semester. Students must request a refund in writing prior to or no later than the “10 percent” date of the semester.

Students who do not plan to attend must drop by submitting the Online Withdrawal Form. Any student registered for any class as of the first day of the semester, will be responsible for 25% of tuition, unless the instructor has reported you as never entering the class.

Any student enrolled who is in the military reserve or National Guard who may be called to Active Duty that makes it impossible for them to complete their course requirements, will be granted a full refund for military purposes. The student must provide official deployment documentation before reporting to or upon their return from service, to the Director of Registration & Records for a refund to be considered.

See the Academic Calendar on the College website for the “10 percent” date of each semester. Refund information is available online under the academic calendar.

### Textbooks and Supplies

The cost of textbooks and supplies varies with the program of study. These items may be purchased from the college bookstore. The bookstore accepts MasterCard and VISA credit cards for payment of textbooks and other merchandise.

# Financial Aid and Veterans Benefits

## Financial Aid

Many students seek some form of financial aid to help meet their college expenses. Students seeking college degrees, diplomas and most certificates may qualify for state or federal assistance. Individuals taking continuing education coursework, certain curriculum certificate programs, and special credit majors (undeclared or non-degree seeking) are not eligible to receive state or federal grants or loans.

Financial aid programs are available in the form of scholarships, grants, loans and work study programs. Financial Aid in Student Services can provide you with specific information. You can qualify for financial aid if you:

- are accepted for admission in an eligible programs as a student; and
- show eligibility by completion of the online FAFSA (Free Application for Federal Student Aid) form: [www.fafsa.gov](http://www.fafsa.gov)

Rowan-Cabarrus Community College's school code for the FAFSA is 005754 for all campuses. Check the Rowan-Cabarrus website for additional and detailed information: <http://www.rccc.edu/financialaid>.

The college serves as a referral agency for:

Veterans Benefits  
Social Security  
Vocational Rehabilitation  
Department of Social Services  
Department of Commerce, Employment Services

The college serves as a disbursing or coordinating agency for:

Federal Direct Student Loans  
Federal Direct Parent Loans  
Federal Supplemental Educational Opportunity Grants (SEOG)  
Federal Pell Grant  
North Carolina Education Lottery Grant  
North Carolina Community College Grant

## Scholarships

Various scholarship opportunities are available through Rowan-Cabarrus Community College. Check the Rowan-Cabarrus website - <http://www.rccc.edu/scholarships/> often for updated scholarship information. Most scholarship applications are available in the spring of each year for the following fall semester.

The Financial Aid office can provide you with information on other types of aid which may be available. In addition to scholarships and grants, many Rowan-Cabarrus Community College students are employed through the federal college work study programs on a part-time basis in offices, labs, libraries, or other campus locations. Work study compensation counts as part of your financial aid package.

Applications for financial aid are accepted throughout the year, and assistance will be given as funds are available. Students must meet Satisfactory Academic Progress (SAP). Check the website ([www.rccc.edu/financialaid/terms](http://www.rccc.edu/financialaid/terms)) for the specific requirements regarding Satisfactory Academic Progress.

For more information on financial aid, loans and scholarships, contact Financial Aid, 704-216-RCCC (7222).

## Financial Aid and Scholarship Refunds

Students that have funds remaining after tuition, books, and fees charges are paid receive the remaining balance usually within in 6-8 weeks of the beginning of the semester. Every curriculum student will receive a My RCCC Card in the mail from HigherOne. Upon activation of the card, students will receive the disbursement on the debit card or into their personal checking/savings account depending on the preference the student selects when activating their My RCCC Card. Students receive the card at no charge however, replacement fees may apply.

## Textbook Purchases

Students with financial aid or scholarship awards may purchase textbooks and supplies through the on-campus bookstore. Rental books for selected classes are available with a credit card on file. Rental options are not available for financial aid and scholarship recipients.

## U. S. Department of Veterans Affairs Benefits

Rowan-Cabarrus Community College programs are approved by the North Carolina State Approving Agency for the enrollment of persons eligible for education assistance benefits from the U.S. Department of Veterans Affairs (VA). Entitled veterans, eligible spouses, and dependent children who have applied, met all admission requirements, been fully accepted, and have registered for classes, may be CERTIFIED to the U.S. DVA Atlanta, Georgia office as enrolled and in pursuit of an approved program of education.

It is the responsibility of the veteran to request from the last high school and all colleges attended that an official transcript(s) be sent directly from the school to Rowan-Cabarrus Community College. Students cannot be certified to receive benefits until all transcripts have been received and evaluated. Students may be certified only for the classes required for completion in their approved program of study.

Veterans receive educational benefits on the following basis:

- Arts and Sciences Courses - Credit Hours per Week
- Occupational Courses - Credit Hours per Week
- Tele-Course, Hybrid or Internet courses may change your eligible credit hour certification.

Check the Rowan-Cabarrus Community College website <http://www.rccc.edu/onestop/tag/veteran-benefits/> for additional information.

## Grades and Progress Reports

Records of progress are kept by this institution on veteran and non-veteran students alike. Progress records are furnished to the students, veterans, and non-veterans alike at the end of each scheduled school term through WebAdvisor.

Rowan-Cabarrus is a Service-member Opportunity College (SOC). Students who may have transferable credit are encouraged to submit their documents to the Rowan-Cabarrus Records and Registration area of Student Services. Refer to the catalog section on Academic Policies and Procedures.

## Navigation Station

Navigation Station is more than a place... it's a philosophy. You come to Rowan-Cabarrus Community College to learn and not to run from office to office taking care of the administrative details of your education. Navigation Station brings together a host of administrative services under one roof so that you can get back to the business of being a student!

Stop here for everything you need to get registered and pay for your classes. We can help you every step of the way, from filing financial aid forms and understanding your payment options, to registering for classes, requesting a transcript, or completing an application for graduation. You can make an appointment with an academic advisor and find out about your holds and how to remove them. If you are having a life event and need to speak to someone, one of our counselors is here to listen.

The Navigation Station offers extended hours at both our North and South Campuses to meet your needs. Individual services are scheduled by location.



# College Policies and Procedures



# Academic Policies and Procedures

## Confidentiality of Student Records: FERPA

The Family Educational Rights and Privacy Act of 1974 (FERPA) is a Federal law that governs the maintenance of student records. This act, with which the college intends to comply fully, protects the privacy of educational records, establishes the right for students enrolled to inspect records kept by the college about the student and the right to correct inaccuracies in the records. Rowan-Cabarrus Community College recognizes its responsibilities to students in maintaining accurate and confidential student records. Access to the records by persons other than the student is limited and generally requires prior consent by the student. Rowan-Cabarrus Community College adopted a written policy governing the rights of parents and students under the Family Educational Rights and Privacy Act. Copies of this policy may be found in the offices of the President and the Vice President of Student Services at Rowan-Cabarrus Community College.

## Directory Information

FERPA does allow that Rowan-Cabarrus officials may disclose appropriately designated “directory information” without student written consent. Directory information is information contained in a student’s education record that is not generally considered harmful or an invasion of privacy if released. Rowan-Cabarrus officials declare the following items as directory information which can be made available to the public. Students may request to withhold directory information, except where it is required on campus, by notifying the director of records and registration in writing within the first five days after student enrollment that such information is not to be made available.

- Student’s name
- Address
- Telephone listing
- Date of birth
- Field of study
- Dates of attendance
- Degrees, diplomas or certificates awarded
- Scholastic Honors

## Academic Load - Students

A full-time student is one who is enrolled in 12 or more credit hours of course work per semester. Average full-time enrollment for most students will vary between 15 and 18 hours of credit. Students who wish to carry more than 21 credit hours must have prior approval from the vice president of enrollment and the student experience unless their curriculum requirements, as stated in the catalog, require more than 21 hours in a particular semester. Course schedules and course loads should be carefully planned through consultation with a program advisor. Note: The NC General Assembly has set tuition

and registration fees on a “per credit hour” basis with a maximum charge for 16 credit hours. Please see Tuition and Fees section of this catalog for further details.

## Attendance Requirements

All students must attend class during the first week of classes or forfeit their seat in the course. A student is expected to attend every class for which he/she is scheduled and to arrive on time. Instructors will keep an accurate record of class attendance. The student is responsible for contacting his/her instructor when unavoidable absences occur, and for maintaining contact every few days during any necessary extended absence. Students are responsible for withdrawing from any class, if they find they will be unable to complete an academic term. The student must complete and submit the online withdrawal form located at <http://www.rccc.edu/onestop/online-drop-form/> when officially withdrawing from a class after the “10 percent” point of the academic semester/term.

Instructional time missed is a serious deterrent to learning. A student is responsible for fulfilling the requirements of the course by attending all classes (including shops, labs, and clinics) and completing course assignments. Instructors will withdraw students who are accumulating absences and are not communicating with the faculty regarding academic progress in the course.

Distance education students are expected to log-in to their distance education courses during the first week of classes and submit an assignment as required. Please refer to the Distance Education website for more information. Any student who does not enter or log-in to their distance education course by the 10% point will be reported as a no show and will be required to register for the course during another semester.

Some programs and courses at Rowan-Cabarrus Community College may have more stringent attendance requirements due to the nature of a course or program. These requirements are stated in the program description or course syllabus. Students will be informed in writing during the first class meeting of specific attendance requirements. Class attendance is calculated from the first officially scheduled class meeting (includes the drop/add period) through the last scheduled meeting.

## Class Schedules

Rowan-Cabarrus Community College schedules traditional seated classes between 8 a.m. and 10 p.m., Monday through Thursday; and between 8 a.m. and 5 p.m. on Friday. Saturday classes may also be offered. Credit courses are offered during the day and during the evening hours from 6:00 p.m. to 10 p.m. The purpose of offering credit courses both day and evening is to provide flexibility in scheduling and optimum availability of courses. Schedule and course information are published by the college the prior to each semester and are available on the college’s website at: [www.rccc.edu](http://www.rccc.edu). Non-credit Occupational Extension and Personal Enrichment/Personal Interest courses are also offered both day and evening.

## Program Advisors

Each student enrolled in a program has access to a program advisor or advising group who assists the student in planning course schedules. The student may seek assistance from any program advisor in his/her particular program of study. The program advisor assists the student in evaluating his/her academic progress and suggests improvements or schedule changes. Program advisors and students are strongly encouraged to develop an educational plan of work prior to registration.

## Withdrawal Policy

If a student withdraws from a class after the end of the drop/add period and before the 65 percent point in the class, he/she will receive a grade of "W." A Grade of "W" will appear on the student's transcript, but will not be considered as hours attempted in the accumulated Grade-Point Average. If a student does not withdraw before the 65 percent point in the class, the student will receive a grade of "F" or the grade earned.

Once a student has enrolled in class and has paid fees, that student remains a member of the class unless:

**Student Withdrawal** - The student officially withdraws from the course by completing the necessary printed or web form available at the following website address: <http://www.rccc.edu/onestop/online-drop-form/>

**Faculty Withdrawal** - An instructor will withdraw the student if the student has not attended courses for two consecutive weeks (or 12.5 percent of course duration), of scheduled course meetings during a 16 week semester whereby the student has not attempted intentional, ongoing communication with the instructor in person, via telephone, or campus email, to discuss the circumstances of the ongoing absence and plan their efforts to complete missed assignments.

**Administrative Withdrawal** - Administrative withdrawal may be implemented as part of mediated resolution to violations of the Campus Code of Conduct and appropriate documentation may appear on the student's official transcript, as needed.

**Medical Withdrawal** - Students may request a medical withdrawal based on injury, illness, or psychological/psychiatric disorder. A Medical Withdrawal will be granted for all courses in the enrolled semester. Medical Withdrawals will not be granted for individual course(s). A Medical Withdrawal request must be made within 30 days of last date of class attendance, and prior to future enrollment.

**Military Withdrawal** - A student may withdraw from courses due to call for Active Duty for military purposes. The student must provide official deployment documentation before reporting to or upon their return from service, to the Director of Registration & Records.

Rowan-Cabarrus Community College reserves the right to make changes in the regulations, courses, fees, and other matters of policy and procedure when necessary.

## Grading

Rowan-Cabarrus Community College operates on a grade-point system, and each student's academic standing is established by a grade point average (GPA) which is determined by numerical values assigned to each grade. At the end of each semester, students will access final grades via WebAdvisor based on the following scale. Health programs and developmental studies courses are graded on a variation of this scale.

<b>Grade</b>	<b>Grade Explanation</b>	<b>Quality Points</b>
A	90-100 Excellent	4 quality points per semester hour
B	80-89 Good	3 quality points per semester hour
C	70-79 Average	2 quality points per semester hour
D	60-69	1 quality point per semester hour
F	<60 Failing	0 quality points
I	Incomplete	0 quality points
W	Withdrawn	0 quality points
AU	Audit	0 quality points
CE	Credit by Exam	0 quality points
P	Passing, Developmental	0 quality points
R	Repeat, Developmental	0 quality points

\*Students enrolled in Associate Degree Nursing, Practical Nursing programs, Dental Assisting and Radiography should refer to the specific program webpage for the numerical grade required in related courses. Each program will list the required minimum grade for admission to and continuation in the program. All health program students should refer to the specific program handbook regarding the minimum grade to be earned for program progression.

In Developmental Studies courses, a grade of 80 or above is required for satisfactory completion. The North Carolina Community College System has established this minimum standard for satisfactory completion of developmental courses. Students earning numerical grades below 80 will receive the grade of "R" (Repeat) and must register again for the course. Developmental Studies courses are noncredit courses and are not included in the Grade-Point Average (GPA).

## Grade Appeal Procedure

College website <http://www.rccc.edu/onestop/794/rccc-grade-appeal-request/>. Students must issue the request for appeal within 10 business days of receiving a grade or forfeit the right to appeal.

## Grade of Incomplete (I)

A grade of Incomplete (I) may be assigned by the instructor for any student whose coursework is of passing quality which represents a significant amount of the requirements for a final grade, but is incomplete due to recent illness, accident, or recent death in the immediate family. Students who need additional time to complete the objectives of a course due to either of these unusual circumstances beyond the student's control, should contact the Instructor and request a grade of incomplete. All incomplete work must be submitted and graded by the last day of the following semester/term.

The grade of "I" is computed in the Grade-Point Average as "0" quality points. However, when a student completes the provisions necessary for the removal of an "I," the "I" will be removed from the student's record and replaced with the grade earned. The GPA will then be recomputed using the grade earned. If course requirements are not met by the deadline given, the grade of "I" will automatically be changed to a grade of "F." The student must register again for the course.

Any student who has a grade of "I" in any course at the end of the term will not be considered for Scholastic Honors for that semester/term. To not jeopardize this honorable mention, it is recommended that students not delay completing all course objectives by the deadline agreed upon by the instructor and student.

## Grade-Point Average (GPA)

The GPA for one semester is obtained by the following method: The quality points for each course are found by multiplying the appropriate grade point value for the grade earned by the semester hour credits assigned to the course. The total grade points for all courses in the grading period are added. Dividing the total of the grade points by the total of the semester credit hours gives the grade-point average for the semester.

Example:

Course	Grade	Credit Hours	Grade Points
BIO 168	A	4	= 16
ENG 111	B	3	= 9
PSY 150	B	3	= 9
ACA 122	C	2	= 6
MAT 161	D	3	= 3
TOTAL		15	TOTAL 43
GPA		43 / 15 = 2.86	

Grade of "A" earned on a three-semester hour credit course equals 12 grade points.

## Cumulative Grade-Point Average

The cumulative GPA is determined by using the total grade points in two or more semesters divided by the total course credits attempted in two or more semesters.

## Academic Standards

Students must maintain satisfactory academic standards. Academic evaluation of student performance occurs at the end of each semester. This evaluation may be neither arbitrary nor capricious and must be consistent with previously announced criteria. Minimum satisfactory academic performance is defined as maintaining a cumulative Grade-Point Average (GPA) of at least 2.0 (a grade of "C").

## Advising Students Who Experience Academic Difficulty

Instructors are responsible for keeping students informed regularly about their progress in individual courses, with specific responsibility to expedite the reporting of student performance at each measurement point (chapter tests, mid-terms, finals, etc.). Instructors and advisors are responsible for assisting students who are experiencing academic difficulty. Advice to help students improve performance may include, but is not limited to, completing developmental education courses or subcomponents of developmental programs, carrying a reduced course load, special tutoring, or repeating selected courses. Semester grade reports are sent to all students. The faculty advisor and student should arrange a conference with a counselor whenever the nature of a student's academic difficulty is beyond the scope of the instructor or faculty advisor's ability to assist. Failure to maintain satisfactory academic standards will result in academic probation and can result in academic suspension.

## Academic Probation

A student who fails to maintain satisfactory academic standards at the end of any term will automatically be placed on academic probation for the next term. A student placed on academic probation will not be allowed to register and/or begin class until the student has (a) participated in an Academic Probation Workshop or (b) met with a Student Services counselor. Either of these establishes corrective conditions to help the student achieve satisfactory performance while continuing probationary enrollment. The hold on registration/class attendance would then be lifted and documentation of the corrective actions is recorded and maintained by the counseling and career services team. A student on academic probation who fails to achieve satisfactory academic standards by the end of the academic probationary term is subject to academic suspension and will not be allowed to register for the next term without the approval of the Director of Counseling and Career Service or his or her designee. At each level of academic probation, the probationary period and requirements will be explained to students by a member of the counseling staff. All students enrolled in college credit courses are subject to maintaining the college's satisfactory academic progress policies.

## Academic Suspension

At the end of each semester, the counseling staff from the direction of the director of counseling and career services will review the cases of all students on academic probation who failed to achieve satisfactory academic standards within the stated time period. After one semester of academic suspension, a student may also apply for readmission to the program from which he or she has been academically suspended if the sequence of course offerings make readmission possible.

## Academic Appeals Committee

Appeals of academic suspension will be referred by the Director of Counseling and Career Services to the academic appeals committee no later than five days after receipt. If the academic appeals committee reverses suspension, the student will be afforded an opportunity to make up all work missed during the appeal process.

## Scholastic Honors

The following scholastic honors lists are posted each semester on the Rowan-Cabarrus website: <http://www.rccc.edu/student-services/scholastic-honors/>. Scholastic Honors are defined as below:

### President's List

A full-time student achieving a grade-point average of 4.0 for the semester will be recognized on the President's List. To be eligible for the President's List, the student must be a full-time student enrolled in a minimum of 12 credit hours.

### Dean's List

A full-time student obtaining a grade-point average of 3.5 or above for the semester will be recognized on the Dean's List. To be eligible for the Dean's List, the student must be a full-time student enrolled in a minimum of 12 credit hours.

### Honors List

A student obtaining a grade-point average of 3.0 or above for the semester will be recognized on the Honor's List. To be eligible for the Honor's List, the student must be enrolled in a minimum of six credit hours.

Note: Since Developmental Courses are non-credit courses, they are not included in the total hours required for Scholastic Honors.

## Course Residency Requirement

A minimum of 25 percent of the total number of credit hours required for graduation in a particular program must be taken at Rowan-Cabarrus Community College. No more than 75 percent of required credit hours can be accepted for transfer credit.

## Course Substitution

In an attempt to meet graduation requirements, it is sometimes necessary to substitute one course for another. A student may request credit for a course required in his/her program of study based on successful completion of a substitute course. The course requested must be equal in credit and comparable in value. Action upon such substitutions must be initiated by the student's program chair, who submits the request to the Office of Student Records for validation. A student may substitute up to a maximum of five courses. Final approval for course substitutions is based on State Curriculum Standards.

## Course Repeat Rule

Students may repeat a course for which they received credit one time, regardless of the grade received, unless specified in the curriculum. Although both grades will appear on the student's record, only the higher grade will be counted toward the cumulative grade-point average.

For students receiving Veteran's Benefits, approval is required prior to repeating any course for which a final grade of "F" was received. This can only be done once per course. If a passing grade of "D" or better was received, the course cannot be repeated for Veteran's Benefits. Courses for which a grade of "W" was received, may be repeated for Veteran's Benefits, providing the student's cumulative GPA indicates overall satisfactory progress to date. Approvals will be communicated through the campus Veteran's Benefits officer.

## Auditing Courses

An audit is the completion of a course for which no assessment is made or grade awarded. Students who wish to audit courses must register and pay tuition and fees associated with those courses. Financial Aid will not pay for any course that is registered as an audit.

If an audit is not declared at the time of registration, students must obtain approval from the instructor of the class no later than the "10 percent" point of the course.

Students auditing courses receive no academic credit but are encouraged to attend class, participate in discussions, and take examinations. Normal attendance policies will apply. Students withdrawing during the semester will be given a grade of "W." Audited coursework will not be considered for transfer credit toward any other Rowan-Cabarrus program. Audited courses are not eligible for transfer credit to another institution.

## Tests and Final Examinations

Tests and quizzes (oral and written), including comprehensive final exams, are given by the instructor in accordance with the approved course syllabus.

## Transfer of Credits - College Coursework

Transcripts from other regionally accredited institutions may be evaluated for transfer credit. Awarding of credits earned at a non-regionally accredited institution will be reviewed on a case-by-case basis.

Any student who wishes to have transfer credit evaluated by Rowan-Cabarrus Community College should request an official transcript from the transferring institution be sent to the Records Office. Courses submitted for transfer credit must be equivalent to offerings at Rowan-Cabarrus. Exceptions to the transfer of credits policy may be made by the appropriate program chair and the academic vice president. Only courses with grades of a "C" or higher will be accepted for transfer. Quality points will not be transferred. No more than 75 percent of required credit

hours can be accepted for transfer credit. Only students who have applied and been accepted in to a Program of Study at Rowan-Cabarrus will receive an official evaluation of transfer credit.

Credit may also be awarded for appropriate scores on subject areas of the College Level Examination Program (CLEP), the Dantes Subject Standardized Tests (DSST), or the Advanced Placement (AP) Program. Official test results should be submitted to the Admissions Office.

Students receiving an Associate in Arts, Associate in Science, or Associate in Fine Arts degree from Rowan-Cabarrus will find those credits transferable to most colleges and universities. Students receiving an Associate in Applied Science degree will find their credits transferable to most private colleges in our area. Students should consult the receiving institution to determine the credits that will transfer from the program in which they are enrolled. A student may obtain general information about cooperative programs from the admissions office, and is responsible for seeking specifics and complete requirements from the school that awards the degree.

Rowan-Cabarrus is a Service-members Opportunity College (SOC) which means members of the military may receive academic credit for education and training completed while in service. Veterans may also receive credit for coursework completed while in the military which is applicable to the major selected at the college. Veterans must provide a transcript evaluated by ACE (American Council of Education) to be awarded appropriate credit. Students should provide the necessary documents to the student services, records and registration area for evaluation.

Upon completion of evaluation of any transfer credit, notification will be sent to the student RCCC email account.

## Transfer of Credits - Professional Certificates

An enrolling student may request that professional certificates with appropriate documentation be evaluated for full or partial course credit within his/her major. Additional criteria may be required along with the certificate to receive full course credit. For each area of certification, the appropriate program chair will determine the Rowan-Cabarrus course equivalencies and corresponding certification required for credit.

The student should notify the program head of which course(s) the professional certification is to be applied by submitting the original professional certificate for review. The student should submit this information during the admissions process; however, a professional certification can be submitted at any time during the student's enrollment at the college. The program head will complete the credit by professional certification form and submit it to the appropriate academic dean for approval, along with a copy of the certification. Once approved by the dean, the

documentation will be sent to student services' records department for assignment of credit to the permanent record. No more than 75 percent of required credit hours for a degree or diploma can be accepted for credit in this manner. Professional certifications should be current, and program heads can provide information regarding time limits (i.e. within last five years) in order for credits to be awarded for a particular program of study.

Rowan-Cabarrus Programs of Study accepting appropriate Professional Certification:

- Air Conditioning
- Heating and Refrigeration
- Automotive Systems Technology
- Computer Information Technology
- Computer Programming
- Construction Management
- Cosmetology
- Electrical/Electronic Technology
- Machining Technology
- Medical Office Administration
- Networking Technology
- Office Systems Technology
- Web Technologies
- Welding Technology

Please check the College website for updates and revisions to the technical programs of study that accept professional certifications for full or partial course credit.

Examples of Professional Certifications and related Programs of Study:

- Automotive Service Excellence (ASE) Program
- Certificates – Automotive Systems Technology
- Certified Professional Secretary (CPS) Credentials – Office Systems Technology
- Medical Office Administration Degree or Diploma

## Credit by Examination

Students enrolling at the college who believe they are proficient in a subject due to Continuing Education Units (CEUs), life experiences or professional certifications may request credit by examination. The examination may be written, oral, a performance test, or a combination of these.

To seek credit by examination, a student should obtain guidance from his/her faculty advisor, approval from the program head of the course in question, and must be registered for the course for which credit by examination is sought.

The examination for credit must be administered by the instructor during the first eight class days of fall or spring semester and within the first five days of summer term. Tuition and Fees for credit by examination are the same as for regular enrollment. If the examination is completed satisfactorily with a grade of "C" or better, the instructor will then complete a credit by examination form and forward it to the director of records for a grade of "CE" to be awarded. A student who is unsuccessful with the

examination may not request a second attempt, but may remain in the course through completion of the semester. The decision of the examining faculty is final.

Credits earned by examination will be entered on the student's permanent record, but quality points will not be awarded for such credit. Credits earned by examination may be used to satisfy graduation requirements but cannot be used to satisfy the policy stating 25 percent of the credits required for graduation must be taken at Rowan-Cabarrus Community College. Hours earned by credit by examination will not be used to satisfy VA or Pell Grant requirements. Hours earned by credit by examination are not transferable to other colleges. For further information, contact the program chair of your area of study or student services.

Students receiving financial aid, scholarships or third party payment of tuition are responsible for checking with the financial aid office before requesting credit by examination.

## Advanced Placement for High School Courses

The North Carolina High School to Community College Articulation Agreement provides a seamless process that joins secondary and postsecondary Career and Technical Education programs of study. The college partners with the Rowan and Cabarrus County high schools and Kannapolis City Schools in an effort to award advanced placement credit based on high school achievement. Details concerning specific requirements are available from counselors at the high schools.

## Degree, Diploma, and Certificate Requirements

Students who successfully complete a two-year technical education program will earn the Associate in Applied Science Degree. Students who complete the Arts and Sciences program will earn the Associate in Arts or Associate in Science Degree. The Diploma is awarded to students who satisfactorily complete a one-year vocational program or the general education core for the Associate in Arts or Associate in Science program. Various programs offer certificates that can often be completed in one semester.

A student is scholastically eligible for graduation when he/she has satisfied the specific requirements of the college and the program for which he/she is enrolled, completed a minimum of 25 percent of required hours in residence at Rowan-Cabarrus, and has earned a program grade point average of at least 2.0. A student may graduate using the catalog under which he/she initially enrolled or the current catalog. A student not enrolled for 12 consecutive months (or more) will re-enter under the current catalog.

## Graduation Events

Graduation exercises are held at the end of the spring semester. The specific date of graduation is listed in the Academic Calendar. Graduation rate information for Rowan-Cabarrus Community College is available on the college website ([www.rccc.edu](http://www.rccc.edu)) and in student services.

For more information on graduation please see our website at: <https://www.rccc.edu/recordsregistration/graduation/>

## Graduation Honors

To be eligible for honors recognition, students must complete any coursework required for graduation with no grade lower than a “C”. Students, who earn a grade-point average 3.5 through 3.99 in the program of study, will graduate with Honors. Students who earn a 4.0 in the program of study will graduate with High Honors.

## Outstanding Student Awards

These awards are made to the graduates who have distinguished themselves by being most outstanding in terms of scholastic achievement, performance, and maturity of purpose during their program of instruction at Rowan-Cabarrus Community College.

## Student Records

Student Records and Registration is a division of Student Services. The Student Records and Registration department is responsible for maintaining student records by recording each student’s achievements into permanent educational records. These records, such as grades, grade-point average, and courses completed, are used to award degrees, certificates and diplomas. Student records, such as transcripts, are available for students to demonstrate their successes to potential employers or other institutions of higher learning. For that reason, students are encouraged to understand their program of study and encouraged to review his/her record each semester, prior to registration, to assure program requirements are being met.

## Transcript Request Policy

In accordance with the Family Educational Rights and Privacy Act of 1974 (FERPA), students and former students needing official copies of their academic transcript must make request electronically through the college website at <https://www.rccc.edu/onestop/626/transcript-request-form/>

Rowan-Cabarrus Community College in partnership with SCRIP-SAFE International provides twenty-four hour access to online transcript ordering through a secure website. This process is completely secure and can be delivered to your intended recipient by mail and/or electronically.

## Special Students

### General Information about Special Students

All students are special at Rowan-Cabarrus Community College; however, some students have special needs. This section addresses the following: services for students with disabilities, enrollment and registration for sex offenders, special credit students, and undocumented persons.

## Disability Services

### Policies Regarding Students with Disabilities

Disability services at Rowan-Cabarrus are offered to assist students with disabilities in achieving their educational and vocational goals and to comply with section 504 of the Rehabilitation Act of 1973, and the Americans with Disabilities Act of 1990. The college’s goal is to make Rowan-Cabarrus accessible for all students. In order to minimize the effects of a student’s disability on his/her classroom performance, a reasonable adjustment or accommodation is provided as long as an accommodation or an adjustment does not alter a published course competency or course standard. Services are provided based on documentation provided to a Disability Services Counselor by the student and the individual’s particular need and circumstance.

It is the mission of Disability Services for students with disabilities to have equal access to learning at Rowan Cabarrus Community College. Believing that students with disabilities can better advocate for their own needs with greater success, the office of Disability Services strives to empower students at every step.

### Request for Assistance or Accommodation

Students seeking assistance or accommodation are responsible for making their disability known to the disability services counselors in student services. Students may elect to disclose a disability at any time. Rowan-Cabarrus may not seek out and identify students with disabilities. Disability services provide support services in curriculum, continuing education and pre-college courses. Because disability accommodations are not automatic and often require specific arrangements, students seeking disability accommodations should make contact with Disability Services for any additional information as soon as possible.

Students are encouraged to contact disability services as soon as possible. Requests for accommodations should be made at least three weeks prior to the first day of class for which the accommodations are requested.

All attempts will be made, but without minimal advance notice, Rowan-Cabarrus cannot assure that all appropriate accommodations can be accomplished prior to the first class.

## Required Documentation

Students seeking assistance or accommodation must provide documentation from an appropriate professional. Required documentation includes the results of medical, psychological, educational and/or emotional diagnostic tests or evaluations that verify both the need for accommodation, and the specific type of accommodation requested. Specific documentation guidelines are available through disability services.

Documentation will be considered confidential and will be maintained by disability services. Disability documentation is not a part of the academic record. This information will be considered confidential and is to be shared within the institution on a need-to-know basis only. Disability records may be destroyed five years after the student's last enrollment.

For students with learning or other non-apparent disabilities, documentation should be current, which is generally considered no older than three years. Students who provide documentation showing a history of disability may be granted accommodations for one semester in order to allow the student an opportunity to update older documentation; however, accommodation beyond one semester will be dependent upon the student providing current documentation.

Rowan-Cabarrus may also require an updated evaluation or assessment of disability.

## Accommodation Plan

Upon a student's request for accommodation and a review of appropriate documentation, the student and a disability services counselor will develop an accommodation plan in consultation with faculty as appropriate or necessary. The plan will outline specific accommodations or adjustments. These may include physical, testing, instructional, academic support and/or equipment accommodations. Requested accommodations must be supported by documentation.

The accommodation plan may include a pre-determined schedule of meetings to monitor progress with a disability services counselor. A copy will remain on file with disability services.

The accommodation plan must be reviewed and/or updated with each semester registration. Accommodations are not automatic and must be requested in advance. Accommodations will not be granted retroactively.

Students are expected to maintain contact with disability services as to the implementation and effectiveness of specific accommodations. Students should immediately report any concern regarding their accommodation plan to disability services.

Rowan-Cabarrus does not provide services of a personal nature outside of the classroom. Arrangements for personal services are the student's responsibility.

All students are expected to comply with college policies and regulations as outlined in the Rowan-Cabarrus Catalog/Student Handbook.

## Accessible Services, Materials and Equipment

### Instructor Notification

Instructor notification is not automatic and must be initiated by the student. Following class registration, the student must request an accommodation notification form through disability services. The student will then deliver the accommodation notification to each course instructor. The student must obtain the instructor's signature, provide a copy for the instructor, and return the completed form to disability services. Accommodation will not be in effect until the completed form is returned.

### Classroom Notes

Students with specific functional limitations may request assistance with classroom notes. A determination of the method for obtaining classroom notes is based on disability documentation, course format and the course instructor's recommendation.

Classroom notes will generally be obtained by the utilization of a digital recorder or a volunteer classmate. Carbonless duplication paper is available upon request through disability services as well as a photocopy machine. Students are responsible for providing and operating the digital recorder and batteries.

When presenting an accommodation notification form, the student informs the instructor that notes will be needed and asks for assistance to identify a volunteer. In the event that either the volunteer system or digital recorder is not successful, immediately contact disability services.

A volunteer note-taker or digital recorder does not excuse poor class attendance. Students receiving class notes accommodation should not expect notes for days missed unless special arrangements are made in advance.

Based on the inability to access reasonable and appropriate classroom notes through the use of a digital recorder or volunteer, a student may be eligible for a staff note-taker/scribe. This accommodation will be determined on an individual basis. The student should contact and inform disability services regarding the cancellation of staff note-taker/scribe services. The staff note-taker/scribe will wait 15 minutes following the scheduled class start time. The staff note-taker/scribe will not remain in the classroom when the student is absent. If the student fails to arrive by the second class, the staff note-taker/scribe will assume that the student will be absent for the remaining classes. The student will be expected to obtain missed notes in the same manner as other students.

## Alternative Testing

Testing accommodations, based on disability documentation, may include extended time, reduced distraction environment, test scribe, test reader, computer use for written exams, enlarged print or use of a calculator.

The student is expected to make arrangements, at least two class days in advance, through the course instructor and disability services. Actual test accommodations may be provided through disability services or the testing center based on the specific arrangements made by the student and course instructor. The instructor will be notified if the student is absent at the scheduled time.

## Accessible Materials

Students whose documentation supports an accommodation for printed material in an alternate format should contact disability services as soon as possible following registration. Availability of alternate format material may be limited, so students are encouraged to make a request for textbooks or other class-related materials well in advance. In converting printed text into an alternate form, disability services will try to honor the student's preference. However, depending on the time of the request, the availability of materials, the volume of materials, and the expected time for return, adjustments may be necessary. Such adjustment may include the student using appropriate assistive technology (CCTV or scan/reader computer software) available on campus.

Requests for accessible materials will be processed in the order in which they are received.

## Interpreters

Interpretation and transliteration services will be arranged for qualifying deaf and hard-of-hearing students for scheduled classes, labs, scheduled student activities, and appointments. Every attempt will be made to honor a student's communication preference; however, other arrangements may be made depending on the time of advanced notice and availability of interpreters.

Students must request services in advance to assure that services can be arranged. Students are asked to provide a three-week advance notice for scheduled classes and a one-week notice for scheduled activities or appointments.

Students who request interpreter services and plan to be absent or find that services are not needed must cancel arrangements immediately through disability services.

In the event of an unreported absence, the interpreter will wait 15 minutes following the scheduled class start time. The interpreter will not remain in the classroom when the student is absent. If the student fails to arrive by the

second class, the interpreter will assume that the student will be absent for the remaining classes. The student will be expected to obtain materials in the same manner as other students.

If a student has three unreported absences in a given class, interpreter services may be terminated until the student meets with disability services. The student will be notified in writing.

Students should report any concern or problem involving an interpreter to disability services.

## Adaptive Equipment

Various adaptive equipment or software for on-campus use can be made available to qualified students as a part of a specific classroom accommodation plan. However, any prescriptive or personal devices, including those for home use, are the responsibility of the student.

As a part of the accommodation plan, the qualified student will be able to sign out equipment from the disability services office. Other equipment, such as software or modified keyboards, will be available in the assigned classroom or LRC as requested.

Every attempt will be made to provide appropriate training to enable the student to effectively utilize specific equipment or software. Such training will require active student participation, advance notice, and additional time on campus.

## Personal Services

### Personal Attendants

Students are responsible for providing for their own personal health and hygiene needs along with their mobility needs within the classroom and around campus.

Due to regulations and space limitations, personal attendants generally may not attend class with the registered student unless the accommodation is supported by disability documentation as a health/safety issue and is included in the student's accommodation plan.

### Attendance

Disability Services does not have a role in determining course attendance policies. Students are expected to attend scheduled classes regardless of their disability. Students may request that instructors be informed as to the legitimacy of disability-related absences, but such notification will not excuse or alter the course attendance policy.

Students anticipating absences should notify the course instructor in advance. Students are also responsible for all missed assignments and material.

## Tutoring Services

Tutorial services are scheduled in specific content areas campus-wide through academic programs as appropriate. Qualified students are encouraged to request accommodations in order to utilize those services.

Students are responsible for individual tutoring or individual instruction outside of the scheduled activities offered through academic programs.

## Parking

Accessible parking is available in accordance with state and federal regulations. Students are required to follow all appropriate regulations and to have a North Carolina-issued permit visible when parked in an accessible or handicapped space.

Accessible parking is available on a first-come, first-served basis.

Any student wishing to address accessible parking issues should contact disability services.

## Grievance Process

Students who experience a problem and/or feel unfairly treated should attempt to resolve the problem informally with disability services.

Concerns regarding a specific accommodation will be resolved with the involvement of the student and the appropriate instructor, program head, academic dean, academic vice president, and vice president of enrollment and the student experience.

<https://www.rccc.edu/onestop/rccc-student-grievance-request/>

If a concern cannot be resolved to the student's satisfaction, the student should utilize the student grievance process as outlined in the Rowan-Cabarrus Catalog/Student Handbook.

## Program Evaluation and Development

In consultation with faculty and staff, the Rowan-Cabarrus counseling staff will be responsible for evaluating services at Rowan-Cabarrus for students with disabilities and recommending changes in policies, procedures and services as appropriate.

The Rowan-Cabarrus counseling staff will provide guidance and support to both faculty and staff in providing services for students with disabilities.

The Rowan-Cabarrus counseling staff will provide in-service training and information to Rowan-Cabarrus faculty and staff as appropriate. Professional consultants in the area of services for students with disabilities may be utilized in specific cases and in staff development efforts.

For additional information and resources regarding disabilities for students in higher education, please see the following links:

[www.ahead.org/affiliates/north-carolina](http://www.ahead.org/affiliates/north-carolina)

[www.ADA.gov](http://www.ADA.gov)

[www.edpubs.gov](http://www.edpubs.gov)

[www.disabilityresources.org](http://www.disabilityresources.org)

## Sex Offenders

Persons who are registered sex offenders are required by state and federal law to disclose to local law enforcement their interest in attending college, verifying the dates, times and locations of the coursework of interest.

Offenders may or may not be permitted to enroll and register for courses pending approval of the local law enforcement agency. Offenders who fail to comply with the state and federal law will forfeit their educational opportunity with Rowan-Cabarrus even if otherwise qualified.

## Special Credit Students

Some students wish to register for credit courses, but do not intend to complete a degree, diploma, or certificate program. These students are registered as special credit students - no major declared. They can enroll in classes on a space-available basis and with the approval of their college advisor. Tuition and fees are the same as for regularly enrolled program students. If these students later wish to apply credits earned toward a degree or diploma, they must declare a program/major at student services. A change in status must be submitted when the student has earned 18 semester hours (including a college-level English and math course) as a special credit student. If not already established, at the time a program is declared the student must meet all the regular admission requirements for the program of choice.

## Undocumented Persons

Individuals who are not documented are eligible to take most courses in Continuing Education, and any course in Adult Basic Education and ESL without any restrictions. Enrollment in college credit courses is limited by the following guidelines from the NC Legislature:

- Must pay out of state tuition for the coursework selected.
- Must register at the last hour assuming space is available. Documented students have first priority for seat availability in all curricula.

Federal law prohibits states from granting professional licenses to students that don't have legal residence in the United States. Therefore, admissions to programs leading to a professional license are not permitted.

Undocumented students who are public high schools students enrolled in approved college credit programs through Career and College Promise programs are not subject to this NC statute.

**Deferred Action for Childhood Arrival students (DACA):**

Students must be under the age of 35, residents of the U.S. for at least five years, have a high school diploma from public, private or home school, a GED or Adult high school diploma, and have entered the U.S. at age 15 or younger.

- Not eligible for In-state tuition rate.
- May register for classes at any time during the registration period.

Federal law prohibits states from granting professional licenses to students who do not have legal residence in the United States. Therefore, admissions to programs leading to a professional license are not permitted.

## Standards Governing Student Enrollment

### General Overview:

Students are both members of the external community, which includes Rowan-Cabarrus Community College, as well as members of the internal academic community of the college itself. As citizens of the external community, students are subject to all civil laws, the enforcement of which is the responsibility of civil authorities. As members of the academic community, students are subject to Rowan-Cabarrus Community College regulations and obligations. College students, as adults, are expected to exercise mature and responsible self-discipline, to behave with courtesy and integrity and to maintain appropriate academic standards as well as appropriate conduct standards. Failure to maintain required standards can lead to conditional enrollment or curtailment of enrollment. These standards and enrollment constraints are described in the following paragraphs:

### Student Agreement Regarding Internet Usage

Upon signing the college application, the student accepts and agrees to abide by the policy and responsibilities specified in Student Internet Acceptable Use Policy. Further, with this educational opportunity also comes responsibility, and the student concurs that:

- It is my responsibility to not reproduce or redistribute software and/or software keys licensed to Rowan-Cabarrus Community College.
- It is my responsibility to know and observe the acceptable use policies of external networks accessed via the Rowan-Cabarrus Internet connection.
- It is my responsibility to ensure that the performance of the Rowan-Cabarrus network is not degraded and that authorized users are not deprived of Internet and/or network resources or access by my activities. It is my responsibility to avoid the knowing or inadvertent spread of computer viruses.
- It is my responsibility to ensure that all copyright

laws, including licensing restrictions, are honored. I understand that ownership of text, music, software, and other media is proprietary and, therefore, is protected to the full extent of the law and must be respected.

- It is my responsibility to not intentionally interfere with the normal operation of computer networks or illegally gain access (i.e., hack) to the networks and the information contained within the network resources or attached equipment.
- It is my responsibility to ensure that use of the network and Internet is consistent with student behavior and conduct guidelines and is not for personal financial gain.
- I understand and agree that Rowan-Cabarrus may inspect, monitor or disclose Internet, electronic mail, and/or network activities when required by and constituted by law when there is substantiated reason to believe that violations of any federal, state or local law or any violation of Rowan-Cabarrus Community College policies or procedures have taken place.
- It is my responsibility not to view, download, save, receive, or send material(s) related to or including:
  - Offensive content of any kind, including obscene material;
  - Discrimination on the basis of race, gender, national origin, age, marital status, sexual orientation, religion, or disability;
  - Threatening or violent content or behavior;
  - Illegal activities;
  - Gambling;
  - Personal financial gain;
  - Forwarding email chain letters;
  - Spamming email accounts from Rowan-Cabarrus email services or company machines;
  - Dispersing corporate data to Rowan-Cabarrus customers or clients without authorization;
  - Personal use that states or implies Rowan-Cabarrus sponsorship or endorsement of its message.

Rowan-Cabarrus has the right to review any materials stored on any system provided by the college and to edit and remove any materials. I hereby waive any right which I may otherwise have in and to such materials.

### Student Agreement Regarding Academic Testing Center Usage

Upon signing the college application, the student accepts and agrees to abide by the Student Academic Testing Center Terms for Testing. Further, with this educational opportunity also comes responsibility, and the student concurs that:

- Identification will be required for testing - driver's license or picture ID.
- Students must know course name and number, instructor's name, and course type.
- All books, book bags, and coats will be left in a specified location.
- Disruptive devices (cell phones, beepers, etc.) are to be turned off and not used.
- No notes, books or other supplemental materials will be permitted unless specifically stated on the

- instructor's "Conditions of Testing" form.
- No discussion of any type will be permitted while testing. We are attempting to create a similar environment to in-class testing.
  - All tests will be taken in one sitting and returned to the Examiner/Proctor before leaving the Testing Center.
  - The Examiner/Proctor may consult the Testing Director or security if suspicious or questionable behavior is observed. The rules of student behavior and sanctions also apply to the Academic Testing Center.
  - Please see the Examiner/Proctor and/or the Testing Director if you have questions regarding this agreement or a testing concern before receiving the test.

## Campus Code of Conduct

<http://www.rccc.edu/onestop/618/code-of-conduct/>

### Campus Behavior Standards

The college reserves the right to maintain a safe and orderly educational environment for students and staff. Therefore, when in the judgment of college officials, a student's/patron's conduct disrupts or threatens to disrupt the college community, appropriate disciplinary actions will be taken to restore and protect the well-being of the college community. Students are expected to conduct themselves in accordance with generally accepted standards of scholarship and morality. Community patrons are expected to conduct themselves in accordance with the accepted standards of good citizenship in the state of North Carolina. The purpose of this code is not to restrict student or patron's rights, but to protect the rights of individuals in their academic pursuits on the campus.

#### 1. Academic Dishonesty

(a). Academic Integrity: The college prohibits taking or acquiring possession of any academic material (test information, research papers, notes, etc.) from a member of the college staff or another Student without permission; receiving or giving help during tests; submitting papers or reports presented as the student's original work that are not entirely the student's own; not giving credit for others' work.

(b). Network Files: Rowan-Cabarrus network files are provided to students for academic work. These files are not private and are subject to review for compliance with the college's acceptable use policy for technology, the Digital Millennium Copyright Act of 1998, and general copyright law.

#### 2. Behavior

(a). Indecent Conduct: The college prohibits disorderly, lewd, or indecent conduct, including public physical or verbal action; language commonly considered offensive (not limited to, but including profanity); or distribution of obscene or libelous written or electronic material.

(b). Violence: The College prohibits mental, psychological or physical abuse of any person (including sex offenses) on college premises or at college-sponsored or college-supervised functions, including verbal or physical actions that threaten or endanger the health or safety of any such persons or which promote hatred or prejudice. This includes fighting and or other disruptive behaviors, which includes any action or threat of action which endangers the peace, safety or orderly function of the college, its facilities or persons engaged in the business of the college.

(c). Harassment: The college prohibits any act, comment, behavior, or clothing which is of a sexually suggestive, harassing, offensive, or intimidating nature. The college prohibits stalking, or behavior which in any way interferes with another student's rights or an employee's performance or created an intimidating, hostile or offensive environment. (This includes the display or navigation to pornography or other inappropriate websites and materials.)

(d). Disruption: The college prohibits any intentional obstruction or interruption of teaching, research, administration, disciplinary proceedings or other college activities, including public service functions, and other duly authorized activities on college premises or at college-sponsored activity sites.

(e). Failure to Comply: Refusal to adapt one's behavior to instructions of college officials is prohibited. If, in the opinion of college officials, clothing or behaviors (including gang colors, signs or symbols) are threatening, intimidating or offensive in nature, sanctions may be imposed immediately.

### 3. Use of College Property

(a). Purposeful Use of Campus Facilities: The college prohibits loitering without educational purpose or goal; therefore, individuals must be engaged in purposeful acts on campus which meet educational goals or in appropriate recreational and extracurricular activities.

(b) Use by Unattended Minors: The college prohibits minors under the age of sixteen (16) from being on the campus unattended. Minors are not allowed in classrooms, labs, shops, learning resource center or other instructional areas without college authorization. Parents and guardians whether enrolled in college or as a community patron, must remain with the minor child at all times. Violators will be asked to leave the premises. Early College, emancipated minors and dual-enrolled students are exempt from this requirement.

(c) Theft and Damage: The College prohibits theft of, misuse of, or harm to college property, or theft of or damage to property of a member of the college community or a campus visitor on college premises or at a college function.

(d) Occupation or Seizure: The College prohibits occupation or seizure in any manner of college property, a college facility, or any portion thereof for a use inconsistent with prescribed, customary or authorized use.

(e). Presence on College Premises: The college prohibits unauthorized entry upon the college premises; unauthorized entry into a college facility or a portion thereof which has been restricted in use; unauthorized presence in a college facility after closing hours; or furnishing false information to gain entry on the college premises or into a college facility.

(f). Assembly: The college prohibits participation in or conducting an informal or formal unauthorized gathering in a manner that threatens or causes injury to persons or property or that interferes with free access to, ingress or egress of college facilities, that is harmful, obstructive, or disruptive to the educational process or institutional functions of the college; or remaining at the scene of such an assembly after being asked to leave by a college official.

(g). Fire Alarms: The college prohibits setting off a fire alarm or using or tampering with any fire safety equipment on college premises or at college-sponsored activity sites, except with reasonable belief in the need for such alarm or equipment. In the event of a fire alarm sounding, students MUST evacuate the building, unless otherwise directed by a college official.

(h). Emergency Phones: The college prohibits the misuse of the emergency phones in college hallways in making false reports of emergencies, disturbances, physical injury or illness of students, employees or college visitors requiring attention of campus security or off-campus emergency personnel. Students activating the emergency phone are required to give their full-name, nature of the emergency, exact location of the emergency and stay "on the line" with the college official until released. Exception: If the individual activating the emergency phone believes they are in imminent danger from another person, they should provide as much information as possible before leaving the phone in the connected position.

#### 4. Drugs, Alcohol and Other Substances

(a). Drugs and Alcohol: Substances referred to under this policy include all illegal drugs, alcoholic beverages and misused legal drugs (both prescription and over the counter). The college prohibits possession or use of alcoholic beverages on college premises or at college-sponsored or supervised functions (including off-campus functions) unless otherwise permitted by a college administrator. The college prohibits being in a state of intoxication on college premises or at college-sponsored or supervised functions (including off-campus functions) or in a college-owned vehicle. The college prohibits possession, use, sale or distribution of any controlled substance, illegal drugs, or drug paraphernalia except as expressly permitted by law. Any influence which may be attributed to the use of drugs or of alcoholic beverages shall not be in any way limit the responsibility of the individual for the conduct or consequences of his/her actions.

(b). Tobacco and Food: The college prohibits eating and/or drinking in classrooms, shops, and labs or other unauthorized areas, unless otherwise permitted by college officials. The college prohibits use of tobacco products on campus, in college owned vehicles or in properties rented for the purpose of college use.

#### 5. Weapons

The college prohibits possession, storage, use or threat of use of firearms, weapons, ammunition, incendiary devices or explosives on college premises or in personal vehicles parked on college premises or at college-sponsored activity sites. This also includes unauthorized use of any instrument capable of inflicting serious bodily injury to any person. Possession or use of firearms or other weapons on college premises for instructional purposes must have the prior approval of the academic vice president.

North Carolina General Statute 14-269.22 makes it unlawful for any person to possess or carry, whether openly or concealed any gun, rifle, pistol or any other weapon of like kind as defined by the statute. That statute overrides the North Carolina concealed weapons act. Violation of this regulation will result in immediate and permanent expulsion, exclusion from college premises and arrest.

#### 6. Use of Technology

(a). Damage and Destruction: Destruction of or harm to equipment, software, or data belonging to the college or to others is considered unacceptable usage and is subject to disciplinary action. This may include altering, downloading, or installing software on college computers, tampering with computer hardware or software configuration, improper access to the college's network, and disconnection of college computers or devices. Refer to the college Internet and network services policy.

(b). Electronic Devices: Unless otherwise permitted by college officials, the college prohibits use of electronic devices in classrooms, labs and other instructional, event, or support facilities. Such devices include, but are not limited to cell phones, texting devices, beepers, walkie-talkies, cameras, I-Pods, MP3 players or other electronic devices which may cause unnecessary disruption to the teaching/learning process. All electronic devices must be turned off in the classroom, labs or other instructional support areas. Cameras, camera phones or other visual recording devices may not be used in restrooms, locker rooms, changing facilities or other areas where personal privacy is a reasonable expectation.

#### 7. Gambling and Gaming

The college prohibits gambling in any format on the campus. Rowan-Cabarrus also prohibits competitive, unstructured competitive gaming which fosters disruptive behavior. This includes participating on college premises or at college sponsored activity sites in an activity where making a set wager or playing for money or material is involved.

### 8. Forgery

The college prohibits forgery, alteration, duplication, or misuse of college documents, records, computers or instruments of identification with intent to deceive.

### 9. Financial Irresponsibility

The college prohibits failure to pay college-levied charges, fees or fines, failure to repay college-funded loans, the passing of worthless checks to college officials or any fraudulent action when transacting business with the college or third party agent contracted by the college to provide services for students (i.e. bookstore, food service, e-cashiering).

### 10. Disciplinary Probation

The college prohibits violation of the terms of disciplinary probation during the period of probation. Additional violations of any college regulation during the probationary period will result in immediate review for additional sanctions.

### 11. Violation of Rowan-Cabarrus Policy, Rule or Regulation

The college prohibits violation of any Rowan-Cabarrus policy, rule or regulation published in hard copy or available electronically on the Rowan-Cabarrus website ([www.rccc.edu](http://www.rccc.edu)).

### 12. Violation of Law

The college prohibits violation of any federal, state or local law.

## Sexual Misconduct and Title IX

Rowan-Cabarrus Community College is committed to providing a safe and equitable learning environment for all students and employees. Sexual misconduct, including both sexual harassment and sexual violence, is a form of sexual discrimination prohibited by Rowan-Cabarrus and Title IX (Title IX of the Education Amendments of 1972).

Sexual misconduct may include, but is not limited to sexual non-verbal gestures or noises; sexual comments; sex/gender-based harassment; sexual exploitation; stalking; non-consensual sexual touching; relationship violence (domestic and dating violence); and/or sexual violence.

If you have experienced sexual misconduct or sexual discrimination, you should report or seek assistance as soon as possible. We recognize that deciding whether to make a report and choosing how to proceed are personal decisions that may evolve over time. At the time a report is made, you do not have to decide whether to request a particular course of action. Also, you do not need to be certain whether an incident is defined as sexual misconduct. Again, our goal is to provide a safe learning environment for all.

Rowan-Cabarrus encourages all individuals to promptly report sexual misconduct through any of the follow avenues:

Title IX Coordinators	Gaye McConnell	704-216-3600
	Tina Haynes	704-216-3461
Deputy IX Coordinator	Mark Ebersole	704-216-3601
Student Complaint Coordinator	Nekita Eubanks	704-216-3778
Online Reporting Form Navigation Station	<a href="http://www.rccc.edu/safety/title-ix-reporting">www.rccc.edu/safety/title-ix-reporting</a>	704-216-7222
Campus Security		704-216-7600
Director of Campus Safety and Security		704-216-7230
Any College Employee (Faculty or Staff)	Any College Employee (Faculty or Staff)	

Students may also report anonymously through the RCCC Director of Campus Security.

Students need to be aware that any RCCC employee receiving information regarding sexual misconduct is expected to notify a Title IX Coordinator. Only those designated as a confidential resource are exempt from reporting. The following are designated as confidential resources:

RCCC Counseling and Career Services	704-216-7222
Licensed Professional Counselors	
Licensed Professional Counselor Associates	
Career Counselors	
Family Crisis Center (Rowan)	704-636-4718
Safe Alliance (Cabarrus)	704-786-7918

Rowan-Cabarrus prohibits any form of retaliation against the person filing a report or against anyone associated with the report. Any form of retaliation is considered a violation under Title IX and Campus Sexual Misconduct and Interpersonal Violence Procedure.

The *Campus Code of Conduct* and the *Campus Sexual Misconduct and Interpersonal Violence Procedure* apply to all students engaged in college activities either on-campus or off-campus. Please refer the college website ([www.rccc.edu](http://www.rccc.edu)) to review.

Rowan-Cabarrus encourages all community members to assist in the reduction of sexual misconduct and relationships violence through exercising safe and creative intervention strategies rather than standing aside as passive bystander. Safe strategies include watching out for your friends and classmates; believing someone if they tell you that they have experienced sexual misconduct; reporting an incident you witness; and, if needed, calling 911 or campus security.

## Disciplinary Actions & Sanctions

Violation of the Campus Code of Conduct, or of Rowan-Cabarrus policies, or of North Carolina and federal laws while on campus or while off campus when participating in activities sponsored by Rowan-Cabarrus, subjects violators to appropriate sanctions. Charges that a student has violated behavior standards will be investigated by the vice president of enrollment management and the student experience (or designee) to determine whether the charges are significant or whether they may be dropped or informally resolved.

Charges that a student has violated an academic standard will be investigated by the appropriate dean to determine if the charges are significant, whether the charges will be dropped or informally resolved.

Charges that a community patron has violated the Campus Code of Conduct will be investigated by the director of campus safety and security (or designee) to determine if the charges are significant, inform the patron and appropriate administrative unit of any restrictions imposed and notify campus security of any additional action to be taken.

### Procedures for Disciplinary Actions:

This section describes the college disciplinary procedures in response to violations of the Campus Code of Conduct. The vice president of enrollment management and the student experience (or Designee) is responsible for implementing student disciplinary procedures.

### Disposition of Disciplinary Cases:

The following section outlines the procedure for handling student disciplinary cases in accordance with due process and justice.

**Charges:** Any member of the college community may file charges with the vice president of enrollment management and the student experience against any student for violation of the college regulations. The individual(s) making the charge must complete a charge form stating:

- The name(s) of the student(s) involved
- The alleged provision of the Campus Code of Conduct, college regulation, state or federal law that has been violated.
- The date, time and location of the incident
- The names of students or staff directly involved or who witnessed the infractions, and
- The actions taken by the complainant related to the incident.
- The desired solution(s).

The completed charge form (written or electronic) with the printed name and signature of the person filing the charge should be forwarded directly to the vice president of enrollment management and the student experience.

**Investigation and Decision:** Within five (5) business days after the charge is filed, the vice president (or dean) shall complete a preliminary investigation of the charge, and the schedule a meeting with the student(s) alleged to be in violation. After meeting with the student(s) to review the alleged infraction(s) one of the following actions will be taken:

- Drop the charge(s)
- Impose a sanction consistent with those listed below
- Refer the student(s) to a college office or community agency for services

**Notifications:** The decision of the vice president (or dean) shall be presented to the student in writing or mailed within five (5) business days. In instances where the student cannot be reached to schedule an appointment or where the student refuses to cooperate, the vice president (or dean) shall send a certified letter to the student's last known address providing the student with a list of charges, the decision, and instructions governing the appeals process.

**Immediate Interim Suspension:**

This procedure can be invoked by any college official for any student who has been involved in conduct that threatens the health or well-being of any member of the college community or disrupts the function or good order of the college or college premises. The college official must advise the student that failure to cease and desist will result in immediate interim suspension. If the student fails to cease and desist, the college official may invoke the interim suspension until disciplinary proceedings are completed. College officials may contact college security officers to have the student removed from campus. Once interim suspension has been invoked by a college official, a written report must be filed with the vice president of enrollment management and the student experience. The report must detail the individual(s) involved and the nature of the infraction with supporting information. It must include other students or employees who observed the incident. The report must be filed immediately, but not more than two (2) working days after the incident. Incidents in the classroom should be reported to the program head and dean of the division by the instructor involved.

The vice president of enrollment management and the student experience will notify the student in writing of the interim suspension and the reasons for the suspension. The notice will include a description of disciplinary procedures including the time, date and location of any subsequent hearing. The procedural timeline outlined in a subsequent section will be followed by the college to resolve the pending matter.

Interim suspension may result in continued exclusion (beyond the incident date) from class and or other privileges including presence on college property or college sponsored activities until a final decision has been made concerning the alleged conduct violation.

**Verbal Warning (reprimand)**

A verbal communication given to the student or patron by a college agent to cease a behavior or action deemed inappropriate, or possibly a violation of the Campus Code of Conduct. The issuing college official should document the issuing of a verbal warning, including the incident and the student/patron name.

**Written Warning (reprimand)**

A written communication which gives official notice to the student/patron regarding the offense noted and that any subsequent offense of the Campus Code of Conduct will carry heavier penalties because of the prior infraction.

**Interim Suspension**

Exclusion from class or other privileges or activities as set forth in the notice, until a final decision has been made concerning the alleged violation.

**General Probation**

A minor disciplinary offense may result in this penalty which allows the student to show the willingness and capacity to observe the Campus Code of Conduct without further penalty. If a second penalty occurs during the probationary period further action can be taken. The probationary period can be in effect for no more than 2 academic terms.

**Restrictive Probation**

A major disciplinary offense or series of violations may result in a loss of good standing and a matter of official record (transcript notation) denoted by this sanction. Restrictive probation limits the student's/patron's activity on the campus and within the college community. The student cannot be initiated into any local or national organization, receive any college award or recognitions, occupy a position of leadership or travel with any college student organization. Further, the college may restrict the student's/patron's access to campus or use of campus services and facilities. Restrictive probation is for a period of not less than 2 academic terms. Any violation of Restrictive Probation orders may result in immediate suspension.

**Restitution**

Paying for damage, misuse, destruction, or loss of property belonging to the college, college personnel, student, or contract agent for the college.

**Loss of Academic Credit or Grade**

Imposed as result of academic dishonesty.

Withholding grade reports, diplomas, right to register or participate in graduation ceremonies  
Imposed when financial obligations are not met.

**Suspension**

Exclusion from class(es) or all other privileges or activities of the college for a specified period of time. Reserved for offenses which warrant discipline more severe than probation or for repeated misconduct. Students receive this sanction must get specific written permission from the vice president before returning to campus.

## Expulsion

Dismissing a student or patron from campus for an indefinite period. Loss of student/patron status means that the individual will not be permitted on the college property, may not register for any course (basic skills, curriculum, or continuing education, occupational/corporate) and may not participate as a citizen in any college sponsored event. The individual may be readmitted to the college only with the approval of the vice president of enrollment management and the student experience or the academic vice president.

## Appeal of Disciplinary Sanctions

The disciplinary decision of the vice president of enrollment management and the student experience or academic dean must be presented to the student in writing within five (5) working days after the charge is investigated. If a disciplinary sanction is imposed, the student may appeal the decision as follows:

The student must submit the appeal in writing within five (5) working days to the associate vice president of enrollment management and the student experience. The appeal must include the student's reason for appeal, mitigating circumstances or evidence which needs to be considered. The associate vice president and respective dean will render a decision and will notify the student of the decision within five (5) working days of receipt of the appeal.

Further appeals of disciplinary sanctions must be made in writing within five (5) working days of receipt of the associate vice president decision. Appeals are made to the student appeals committee through the director of counseling, the student appeals committee consists of 2 faculty, 2 staff and 1 student who render a decision based on the written appeal submitted. The decision of the committee will be submitted in writing to the student within five (5) days. The decision of the student appeals committee is final except in the case of expulsion.

Final appeal regarding expulsion may be issued to the president within five (5) working days of receipt of the committee decision to support the disciplinary sanction of expulsion. The president may solicit evidence and information regarding the student case, appeal proceedings, recommendations of the student appeals committee and take any other steps deemed appropriate before rendering a decision as soon as possible but not more than ten (10) days from the date received. In the event that a suspension or expulsion is issued, campus security will be notified.

## Appeal of Financial Obligations to the College

Students who want to appeal disciplinary action related to violation of financial indebtedness to the college must do so through the chief financial officer of the college (or designee) until the matter is submitted to local and state legal authorities.

## Student Grievances

Any student may request a review of any college decision or action alleged to be discriminatory or have a negative effect on the student's enrollment status at Rowan-Cabarrus Community College. Students must follow the procedure noted below and may request consultation assistance from student services. A grievance must be presented within 30 days after the action or decision being in question. Processing at each step cannot exceed 30 working days; however, the time may be extended by agreement of both parties or by extenuating circumstances as decided by the administrator to whom the grievance is presented. If the administrator at each step does not meet processing time limitations, the grievant may then request higher administrative assistance in obtaining requested relief. If the grievant does not meet the stated time limitations, the process will be terminated and such grievance cannot be resubmitted.

The student shall first informally discuss the matter in question with the college employee most directly involved unless the issue is a claim of discriminatory harassment. In that case, the student may move directly to the employee's immediate administrator or student services counselor.

If the student is unable to resolve the matter in question through discussion with the college employee directly involved, the student may file a formal grievance form with the employee's immediate administrator. All such grievances shall be in writing and state the basic facts in the case.

If the matter is not resolved, the formal appeal may be processed through the employee's supervising administrators in succession until a satisfactory resolution is obtained or until the appeal reaches the appropriate vice president. The vice president's decision will be final except in the case of expulsion from the college which requires a final ruling by the president.

A student may at any stage of the process consult with the associate vice president for student services to obtain advice regarding the grievance procedure.

<https://www.rccc.edu/onestop/rccc-student-grievance-request/>

# Campus Safety Information

## Campus Communication & Safety Information

The following sections address the college procedures related to communication, inclement weather, safety and security.

### Campus Identification Cards (IDs)

Campus ID cards are multifunctional cards providing access to LRC services and printing in addition to being a key component of campus safety. College students and employees are required to have Campus Identification Cards and be able to produce these on demand of any college security/safety officer or any college administrator. College IDs are produced in the college's Customer Service Department- Navigation Station during the semester.

### College Communication Tools

Rowan-Cabarrus has several methods of communicating with students and employees: college website, college email accounts, WebAdvisor Campus Connect messaging which includes text, email or phone message capabilities. Students and employees are responsible for providing current contact information (including emergency contacts) to insure that correct phone and mailing addresses are available to the college.

Rowan-Cabarrus Email Accounts are assigned to students and employees. The college email account is used for all written communication between service offices and students and employees, including notices of special events, registration, end of semester activities, and updates. College email addresses are assigned once the college application has been processed. For more information about your college email account use the following website address: <http://email.rccc.edu/student/>.

Campus Connect messaging is a multi-functional system used by the college administration to notify students of college closing, safety concerns, and other time sensitive information. The phone numbers and emails used by this system are provided by the student or employee on the enrollment application or employment application. Students and employees are responsible for keeping their mailing address, phone number(s) and alternative email and other contact information current. Updates must be submitted to student services.

Campus Speaker Systems are available on South Campus and CBTC. These systems are used to make announcements related to drills, security concerns and safety issues.

WebAdvisor is a multifunctional tool for students and employees. Students use Web Advisor as a part of the

Registration Tool. Students may search course offerings, register for class sections, drop/add classes sections, view/print your current schedule, make an address and/or phone number change, view grades at the end of each semester, print unofficial transcript and view financial accounts with the college. Employees also have WebAdvisor accounts which will be increasingly important as the college continues to grow.

### Safety and Security

The security department consists of professionally trained members of the respective county or municipal law enforcement or security agency. Security staff safeguards and serves our campus community. Security is responsible for the flow of traffic on campus, building security and enforcement of traffic and parking regulations. Uniformed law enforcement officers have the authority to arrest.

Emergency Instruction Documents are available in every classroom, conference room, office and student use space (i.e., LRC, Student Center). These provide basic information related to action students, faculty and staff can take during a campus emergency.

### Reporting Emergencies Occurring on Campus

Call 9-1-1 for life threatening emergencies and 704-216-7600 for non-life threatening urgent matters.

Emergency Call posts are located on each floor in Building 400, North Campus, as well as some parking lots and on some sidewalk areas on each campus. Emergency Call boxes are for the reporting of life-threatening situations, severe illnesses or injuries. These boxes are only operational during traditional campus hours Monday through Friday. College security and emergency response staff will communicate with the person(s) who activate the call box.

Security personnel are on campus to serve and protect employees and students. We urge you to report any suspicious persons or anything out of the ordinary in the buildings or parking lots to a security officer or the switchboard. Upon request, security personnel will escort you to your vehicle for added protection.

<https://www.rccc.edu/onestop/security-safety-alert/>

Monthly crime logs are provided by Campus Security and Safety at <https://www.rccc.edu/safety/safety-security-updates/>.

**CRIME STATISTICS – ROWAN COUNTY CAMPUS:**

**North Campus**

Offense	2011	2012	2013
Murder/Non-Negligent Manslaughter	0	0	0
Negligent Manslaughter	0	0	0
Sex Offense – Forcible	0	0	0
Sex Offense – Non-Forcible	0	0	0
Robbery	0	0	0
Aggravated Assault	0	0	0
Burglary	1	4	0
Motor Vehicle Theft	0	0	0
Arson	0	1	0
Liquor Law Violations	0	0	0
Liquor Law Arrests	0	1	0
Drug Law Violations	0	0	1
Drug Law Arrests	0	1	0
Illegal Weapons Possession	1	1	3
Illegal Weapons Possession Arrests	0	0	0
Domestic Violence	0	0	0
Dating Violence	0	0	0
Stalking	0	0	0

**CRIME STATISTICS - CABARRUS COUNTY CAMPUSES:**

**South Campus**

Offense	2011	2012	2013
Murder/Non-Negligent Manslaughter	0	0	0
Negligent Manslaughter	0	0	0
Sex Offense – Forcible	0	0	0
Sex Offense – Non-Forcible	0	0	0
Robbery	0	0	0
Aggravated Assault	0	0	0
Burglary	0	0	0
Motor Vehicle Theft	0	0	0
Arson	0	0	0
Liquor Law Violations	0	0	0
Liquor Law Arrests	0	0	0
Drug Law Violations	0	0	0
Drug Law Arrests	0	2	0
Illegal Weapons Possession	0	0	0
Illegal Weapons Possession Arrests	0	0	0
Domestic Violence	0	0	0
Dating Violence	0	0	0
Stalking	0	0	0

**NCRC**

Offense	2011	2012	2013
Murder/Non-Negligent Manslaughter	0	0	0
Negligent Manslaughter	0	0	0
Sex Offense – Forcible	0	0	0
Sex Offense – Non-Forcible	0	0	0
Robbery	0	0	0
Aggravated Assault	0	0	0
Burglary	0	0	0
Motor Vehicle Theft	0	0	0
Arson	0	0	0
Liquor Law Violations	0	0	0
Liquor Law Arrests	0	0	0
Drug Law Violations	0	0	0
Drug Law Arrests	0	0	0
Illegal Weapons Possession	0	0	0
Illegal Weapons Possession Arrests	0	0	0
Domestic Violence	0	0	0
Dating Violence	0	0	0
Stalking	0	0	0

**Cabarrus Business & Technology Center (CBTC)**

Offense	2011	2012	2013
Murder/Non-Negligent Manslaughter	0	0	0
Negligent Manslaughter	0	0	0
Sex Offense – Forcible	0	0	0
Sex Offense – Non-Forcible	0	0	0
Robbery	0	0	0
Aggravated Assault	0	0	0
Burglary	0	0	0
Motor Vehicle Theft	0	0	0
Arson	0	0	0
Liquor Law Violations	0	0	0
Liquor Law Arrests	0	0	0
Drug Law Violations	0	0	0
Drug Law Arrests	0	0	0
Illegal Weapons Possession	0	0	0
Illegal Weapons Possession Arrests	0	0	0
Domestic Violence	0	0	0
Dating Violence	0	0	0
Stalking	0	0	0

**R<sup>3</sup> Center**

Offense	2011	2012	2013
Murder/Non-Negligent Manslaughter	0	0	0
Negligent Manslaughter	0	0	0
Sex Offense – Forcible	0	0	0
Sex Offense – Non-Forcible	0	0	0
Robbery	0	0	0
Aggravated Assault	0	0	0
Burglary	0	0	0
Motor Vehicle Theft	0	0	0
Arson	0	0	0
Liquor Law Violations	0	0	0
Liquor Law Arrests	0	0	0
Drug Law Violations	0	0	0
Drug Law Arrests	0	0	0
Illegal Weapons Possession	0	0	0
Illegal Weapons Possession Arrests	0	0	0
Domestic Violence	0	0	0
Dating Violence	0	0	0
Stalking	0	0	0

**Cloverleaf Center**

Offense	2011	2012	2013
Murder/Non-Negligent Manslaughter	0	0	0
Negligent Manslaughter	0	0	0
Sex Offense – Forcible	0	0	0
Sex Offense – Non-Forcible	0	0	0
Robbery	0	0	0
Aggravated Assault	0	0	0
Burglary	0	0	0
Motor Vehicle Theft	0	0	0
Arson	0	0	0
Liquor Law Violations	0	0	0
Liquor Law Arrests	0	0	0
Drug Law Violations	0	0	0
Drug Law Arrests	0	0	0
Illegal Weapons Possession	0	0	1
Illegal Weapons Possession Arrests	0	0	0
Domestic Violence	0	0	0
Dating Violence	0	0	0
Stalking	0	0	0

**Campus Sex Crimes Prevention Disclosure:**

The “Campus Sex Crimes Prevention Act” is a federal law which requires institutions of higher education to issue a statement, in addition to other disclosures required under the act, advising the campus community where law enforcement agency information provided by a state concerning registered sex offenders may be obtained. It also requires sex offenders already required to register in a state to provide notice, as required under state law, of each institution of higher education in that state at which the person is employed, carries on a vacation, or is a student.

Information regarding individuals on the registered sex offenders’ list can be obtained from the local sheriff’s departments.

Rowan County Sheriff’s Department  
<http://www.rowancountync.gov/GOVERNMENT/Departments/SheriffsOffice/tabid/150/Default.aspx>

Rowan-Cabarrus Community College’s South Campus and Concord Business and Technology Center (CBTC) are located in Cabarrus County.

Cabarrus County Sheriff’s Department:  
<http://www.cabarruslaw.us/>

North Carolina Department of Correction:  
<http://www.doc.state.nc.us/>

This website provides access to search offender information about the offense committed; the county the offense was committed, the date of admission to a correctional facility, and the offender’s status and release date.



# Programs of Study



# Electives for Associate in Applied Science and Diploma Programs

## Humanities and Fine Arts Electives

ART 111	Art Appreciation	3	MUS 110	Music Appreciation	3
ART 114	Art History Survey I	3	MUS 113	American Music	3
ART 115	Art History Survey II	3	MUS 210	History of Rock Music	3
ART 116	Survey of American Art	3	MUS 213	Opera and Musical Theatre	3
ART 121	Two-Dimensional Design	3	PHI 210	History of Philosophy	3
ART 131	Drawing I	3	PHI 220	Western Philosophy I	3
ART 132	Drawing II	3	PHI 221	Western Philosophy II	3
ART 240	Painting I	3	PHI 230	Introduction to Logic	3
ART 241	Painting II	3	PHI 240	Introduction to Ethics	3
ART 244	Watercolor	3	REL 110	World Religions	3
ART 261	Photography I	3	REL 211	Introduction to Old Testament	3
ART 262	Photography II	3	REL 212	Introduction to New Testament	3
ART 266	Videography I	3	REL 221	Religion in America	3
ART 281	Sculpture I	3			
ART 283	Ceramics I	3			
ART 288	Studio	3			
DRA 111	Theatre Appreciation	3			
DRA 112	Literature of the Theatre	3			
DRA 122	Oral Interpretation	3			
DRA 126	Storytelling	3			
DRA 130	Acting I	3			
ENG 125	Creative Writing I	3			
* ENG 131	Introduction to Literature	3			
* ENG 132	Introduction to Drama	3			
* ENG 231	American Literature I	3			
* ENG 232	American Literature II	3			
* ENG 241	British Literature I	3			
* ENG 242	British Literature II	3			
* ENG 243	Major British Writers	3			
* ENG 251	Western World Literature I	3			
* ENG 252	Western World Literature II	3			
* ENG 261	World Literature I	3			
* ENG 262	World Literature II	3			
* ENG 272	Southern Literature	3			
* ENG 273	African-American Literature	3			
* ENG 274	Literature by Women	3			
HUM 110	Technology and Society	3			
HUM 115	Critical Thinking	3			
HUM 120	Cultural Studies	3			
HUM 121	The Nature of America	3			
HUM 122	Southern Culture	3			
HUM 130	Myth in Human Culture	3			
HUM 150	American Womens Studies	3			
HUM 160	Introduction to Film	3			
HUM 161	Advanced Film Studies	3			
HUM 170	The Holocaust	3			
HUM 211	Humanities I	3			
HUM 212	Humanities II	3			

## Additional Information

ENG courses denoted with the \* symbol require a prerequisite or corequisite of ENG 112, ENG 113 or ENG 114. Automotive Systems Technology (A60160), Computer-Integrated Machining Diploma (D50210), Cosmetology (A55140), Medical Office Administration (A25310), Radiography (A45700) and Welding Technology (A50420) do not require ENG 112, ENG 113 or ENG 114 in their program of study. Therefore, these ENG courses will not satisfy the Humanities and Fine Arts requirements for these programs. Early Childhood Education (A55220) and School-Age Education (A55440) do not accept any ENG courses for the Humanities and Fine Arts requirement.

**Social and Behavioral Sciences Electives**

ANT 210	General Anthropology	3	SOC 215	Group Processes	3
ANT 220	Cultural Anthropology	3	SOC 220	Social Problems	3
ANT 221	Comparative Cultures	3	SOC 225	Social Diversity	3
ANT 230	Physical Anthropology	3	SOC 230	Race and Ethnic Relations	3
ANT 230A	Physical Anthropology Lab	1	SOC 232	Social Context of Aging	3
ANT 240	Archaeology	3	SOC 234	Sociology of Gender	3
ANT 240A	Archaeology Field Lab	2	SOC 240	Social Psychology	3
ECO 151	Survey of Economics	3	SOC 242	Sociology of Deviance	3
ECO 251	Principles of Microeconomics	3	SOC 244	Sociology of Death and Dying	3
ECO 252	Principles of Macroeconomics	3	SOC 250	Sociology of Religion	3
GEO 111	World Regional Geography	3			
GEO 112	Cultural Geography	3			
GEO 113	Economic Geography	3			
GEO 121	North Carolina Geography	3			
GEO 130	General Physical Geography	3			
HIS 111	World Civilizations I	3			
HIS 112	World Civilizations II	3			
HIS 115	Intro to Global History	3			
HIS 121	Western Civilization I	3			
HIS 122	Western Civilization II	3			
HIS 131	American History I	3			
HIS 132	American History II	3			
HIS 162	Women and History	3			
HIS 163	The World Since 1945	3			
HIS 221	African-American History	3			
HIS 226	The Civil War	3			
HIS 236	North Carolina History	3			
HIS 260	History of Africa	3			
POL 110	Introduction to Political Science	3			
POL 120	American Government	3			
POL 130	State and Local Government	3			
POL 210	Comparative Government	3			
POL 220	International Relations	3			
PSY 110	Life Span Development	3			
PSY 115	Stress Management	2			
PSY 118	Interpersonal Psychology	3			
PSY 150	General Psychology	3			
PSY 211	Psychology of Adjustment	3			
PSY 234	Organizational Psychology	3			
PSY 237	Social Psychology	3			
PSY 239	Psychology of Personality	3			
PSY 241	Developmental Psychology	3			
PSY 243	Child Psychology	3			
PSY 246	Adolescent Psychology	3			
PSY 249	Psychology of Aging	3			
PSY 259	Human Sexuality	3			
PSY 263	Educational Psychology	3			
PSY 271	Sports Psychology	3			
PSY 275	Health Psychology	3			
PSY 281	Abnormal Psychology	3			
SOC 210	Introduction to Sociology	3			
SOC 213	Sociology of the Family	3			

# Accounting (25100)

<http://www.rccc.edu/catalog-2015-2016/?p=1039>

## Description

The accounting curriculum is designed to provide students with the knowledge and the skills necessary for employment and growth in the accounting profession. Using the 'language of business,' accountants assemble and analyze, process, and communicate essential information about financial operations.

In addition to course work in accounting principles, theories and practice, students will study business law, finance, management and economics. 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 positions in many types of organizations including accounting firms, small businesses, manufacturing firms, banks, hospitals, school systems and governmental agencies. With work experience and additional education, an individual may advance in the accounting profession.

## Awards

- Associate in Applied Science Degree (A25100)
- Diploma (D25100)
- Accounting Systems Track Certificate (C25100AS)
- Government Track Certificate (C25100GT)
- Managerial Track Certificate (C25100MT)
- Personal Finance Certificate (C25100PF)
- Tax Track Certificate (C25100XT)
- Technical Track Certificate (C25100TT)

## Contact Information

The Accounting (25100) program is in the RCCC Department of Engineering and Business Technologies. For additional information regarding this program, contact the program chair, Robin Turner (robin.turner@rccc.edu).

## Gainful Employment

For more information about our graduation rates, the median debt of students who have completed this program and other important information, please view this program in the online RCCC catalog (<http://www.rccc.edu/catalog-2015-2016/?p=1039>)

The \* symbol denotes a core course that may not be substituted.

## Associate in Applied Science Degree (A25100)

<http://www.rccc.edu/catalog-2015-2016/?p=156>

## Course Requirements

The following is a suggested program of study for completing this degree in five semesters. Some students' programs of study may be different, depending on their enrollment status (day, evening, full-time or part-time).

### First Year Fall

ACA	115	Success and Study Skills	1
* ACC	120	Principles of Financial Accounting	4
* BUS	115	Business Law I	3
* CIS	110	Introduction to Computers	3
ENG	111	Writing and Inquiry	3

Take one of the following courses.

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

**Total SHC 17**

### First Year Spring

* ACC	121	Principles of Managerial Accounting	4
* ACC	129	Individual Income Taxes	3
ACC	140	Payroll Accounting	2
ACC	150	Accounting Software Applications	2
* ACC	220	Intermediate Accounting I	4

Take one of the following courses.

ENG	112	Writing and Research in the Disciplines	3
ENG	113	Literature-Based Research	3
ENG	114	Professional Research and Reporting	3

**Total SHC 18**

### First Year Summer

PSY	150	General Psychology	3
---	---	Humanities/Fine Arts Elective	3

**Total SHC 6**

### Second Year Fall

ACC	221	Intermediate Accounting II	4
ACC	225	Cost Accounting	3
ACC	240	Gov and Not-For-Profit Acct	3
BUS	137	Principles of Management	3
---	---	Major Electives	3

Take one of the following courses.

COM	110	Introduction to Communication	3
COM	231	Public Speaking	3

**Total SHC 19**

### Second Year Spring

ACC	149	Intro to Acc Spreadsheets	2
ACC	250	Advanced Accounting	3
ACC	269	Auditing and Assurance Services	3
---	---	Major Electives	3

Take one of the following courses.

* ECO	251	Principles of Microeconomics	3
* ECO	252	Principles of Macroeconomics	3

**Total SHC 14**

**Major Electives**

Take 6 SHC from the following courses. This may include up to 3 SHC from the WBL course/combination of courses.

ACC	132	NC Business Taxes	2
ACC	175	Hotel and Restaurant Accounting	4
ACC	215	Ethics in Accounting	3
ACC	227	Practices in Accounting	3
ACC	268	Info Systems and Internal Controls	3
BUS	125	Personal Finance	3
BUS	217	Employment Law and Regulations	3
BUS	225	Business Finance	3
BUS	240	Business Ethics	3
BUS	260	Business Communication	3
BUS	280	REAL Small Business	4
CTS	130	Spreadsheet	3
DBA	110	Database Concepts	3
ECM	210	Introduction to E-Commerce	3
INT	110	International Business	3
WBL	110	World of Work	1
WBL	111	Work-Based Learning I	1
WBL	112	Work-Based Learning I	2
WBL	113	Work-Based Learning I	3
WBL	121	Work-Based Learning II	1
WBL	122	Work-Based Learning II	2
WBL	131	Work-Based Learning III	1
WBL	132	Work-Based Learning III	2
WEB	250	Database Driven Websites	3

**Total semester hour credits to complete degree: 74**

**Diploma (D25100)**

<http://www.rccc.edu/catalog-2015-2016/?p=166>

**Courses**

* ACC	120	Principles of Financial Accounting	4
* ACC	121	Principles of Managerial Accounting	4
* ACC	129	Individual Income Taxes	3
ACC	140	Payroll Accounting	2
ACC	149	Intro to Acc Spreadsheets	2
ACC	150	Accounting Software Applications	2
ACC	220	Intermediate Accounting I	4
* BUS	115	Business Law I	3
BUS	137	Principles of Management	3
CIS	110	Introduction to Computers	3
ENG	111	Writing and Inquiry	3
PSY	150	General Psychology	3

Take one of the following courses.

ENG	112	Writing and Research in the Disciplines	3
ENG	113	Literature-Based Research	3
ENG	114	Professional Research and Reporting	3

**Total semester hour credits to complete diploma: 39**

**Accounting Systems Track Certificate (C25100AS)**

<http://www.rccc.edu/catalog-2015-2016/?p=186>

**Courses**

ACC	120	Principles of Financial Accounting	4
ACC	121	Principles of Managerial Accounting	4
ACC	149	Intro to Acc Spreadsheets	2
ACC	268	Info Systems and Internal Controls	3
DBA	110	Database Concepts	3

**Total semester hour credits to complete certificate: 16**

**Government Track Certificate (C25100GT)**

<http://www.rccc.edu/catalog-2015-2016/?p=177>

**Courses**

ACC	120	Principles of Financial Accounting	4
ACC	121	Principles of Managerial Accounting	4
ACC	132	NC Business Taxes	2
ACC	220	Intermediate Accounting I	4
ACC	240	Gov and Not-For-Profit Acct	3

**Total semester hour credits to complete certificate: 17**

**Managerial Track Certificate (C25100MT)**

<http://www.rccc.edu/catalog-2015-2016/?p=174>

**Courses**

ACC	120	Principles of Financial Accounting	4
ACC	121	Principles of Managerial Accounting	4
ACC	220	Intermediate Accounting I	4
ACC	225	Cost Accounting	3
ACC	269	Auditing and Assurance Services	3

**Total semester hour credits to complete certificate: 18**

## Personal Finance Certificate (C25100PF)

<http://www.rccc.edu/catalog-2015-2016/?p=183>

### Courses

ACC	120	Principles of Financial Accounting	4
ACC	129	Individual Income Taxes	3
ACC	132	NC Business Taxes	2
ACC	140	Payroll Accounting	2
BUS	125	Personal Finance	3
BUS	217	Employment Law and Regulations	3

**Total semester hour credits to complete certificate: 17**

## Tax Track Certificate (C25100XT)

<http://www.rccc.edu/catalog-2015-2016/?p=180>

### Courses

ACC	120	Principles of Financial Accounting	4
ACC	121	Principles of Managerial Accounting	4
ACC	129	Individual Income Taxes	3
ACC	132	NC Business Taxes	2
ACC	140	Payroll Accounting	2
ACC	150	Accounting Software Applications	2

**Total semester hour credits to complete certificate: 17**

## Technical Track Certificate (C25100TT)

<http://www.rccc.edu/catalog-2015-2016/?p=169>

### Courses

ACC	120	Principles of Financial Accounting	4
ACC	121	Principles of Managerial Accounting	4
ACC	129	Individual Income Taxes	3
ACC	220	Intermediate Accounting I	4
ACC	225	Cost Accounting	3

**Total semester hour credits to complete certificate: 18**

## Advertising and Graphic Design (30100)

<http://www.rccc.edu/catalog-2015-2016/?p=5190>

The \* symbol denotes a core course that may not be substituted.

## Associate in Applied Science Degree (A30100)

<http://www.rccc.edu/catalog-2015-2016/?p=5194>

### First Year Fall

*	ART	131	Drawing I	3
*	GRD	110	Typography I	3
*	GRD	151	Computer Design Basics	3
---	---		Advertising and Graphic Design	
			Specialized Humanities and Fine Arts Course Listing	3

Take one of the following Graphic Design courses.

*	ART	121	Two-Dimensional Design	3
*	GRD	141	Graphic Design I	4

**Total SHC 15-16**

Note: GRD 141 is recommended for the Graphic Design course. ART 111, ART 114, and ART 115 are recommended for the Humanities and Fine Arts course requirement.

### First Year Spring

	ENG	111	Writing and Inquiry	3
*	GRD	142	Graphic Design II	4
*	GRD	152	Computer Design Tech I	3
---	---		Major Electives	3

Take one of the following Illustration courses.

*	GRD	131	Illustration I	2
*	GRD	230	Technical Illustration	2

**Total SHC 15**

Note: ART 231, ART 121, or GRD 141 are recommended for the Major Electives required course.

**Second Year Fall**

* GRD	241	Graphic Design III	4
--	--	Major Electives	8

Take one of the following courses. If AST 151 is selected, AST-151A must also be taken. If CHM 131 is selected, CHM 131A must also be taken.

AST	151	General Astronomy I	3
AST	151A	General Astronomy I Lab	1
BIO	110	Principles of Biology	4
BIO	111	General Biology I	4
CHM	131	Introduction to Chemistry	3
CHM	131A	Introduction to Chemistry Lab	1
CHM	151	General Chemistry I	4
MAT	143	Quantitative Literacy	3
MAT	152	Statistical Methods I	4
PHY	151	College Physics I	4

**Total SHC 15-16**

Note: ART 264, WEB 111, MKT 120, and WBL 111 recommended for the Major Electives required courses.

**Second Year Spring**

* GRD	280	Portfolio Design	4
--	--	Major Electives	8

Take one of the following courses.

COM	110	Introduction to Communication	3
COM	120	Intro to Interpersonal Communication	3
COM	140	Intro to Intercultural Communication	3
COM	231	Public Speaking	3
ENG	112	Writing and Research in the Disciplines	3
ENG	113	Literature-Based Research	3
ENG	114	Professional Research and Reporting	3

**Total SHC 15**

Note: ART 265, GRD 265, GRD 281, and WBL 121 are recommended for the Major Electives required course.

**Second Year Summer**

--	--	Advertising and Graphic Design Specialized Social and Behavioral Sciences Course Listing	3
--	--	Major Electives	1

**Total SHC 4**

Note: WBL 131 is recommended for the Major Electives required course.

**Advertising and Graphic Design Specialized Humanities and Fine Arts Course Listing**

Select three semester hour credits from the following courses.

ART	111	Art Appreciation	3
ART	114	Art History Survey I	3
ART	115	Art History Survey II	3
ART	116	Survey of American Art	3
ART	117	Non-Western Art History	3
ART	118	Art by Women	3
DRA	111	Theatre Appreciation	3
DRA	112	Literature of the Theatre	3
DRA	122	Oral Interpretation	3
DRA	126	Storytelling	3
ENG	131	Introduction to Literature	3
ENG	231	American Literature I	3
ENG	241	British Literature I	3
ENG	251	Western World Literature I	3
ENG	261	World Literature I	3
HUM	110	Technology and Society	3
HUM	115	Critical Thinking	3
HUM	120	Cultural Studies	3
HUM	121	The Nature of America	3
HUM	122	Southern Culture	3
HUM	130	Myth in Human Culture	3
HUM	150	American Womens Studies	3
HUM	160	Introduction to Film	3
HUM	161	Advanced Film Studies	3
HUM	211	Humanities I	3
HUM	212	Humanities II	3
MUS	110	Music Appreciation	3
MUS	112	Introduction to Jazz	3
MUS	113	American Music	3
MUS	114	Non-Western Music	3
MUS	210	History of Rock Music	3
PHI	210	History of Philosophy	3
PHI	220	Western Philosophy I	3
PHI	221	Western Philosophy II	3
PHI	230	Introduction to Logic	3
PHI	240	Introduction to Ethics	3
REL	110	World Religions	3
REL	211	Introduction to Old Testament	3
REL	212	Introduction to New Testament	3
REL	221	Religion in America	3

## Advertising and Graphic Design Specialized Social and Behavioral Sciences Course Listing

Select three semester hour credits from the following courses.

ANT	210	General Anthropology	3
ANT	220	Cultural Anthropology	3
ANT	221	Comparative Cultures	3
ANT	230	Physical Anthropology	3
ANT	240	Archaeology	3
ECO	151	Survey of Economics	3
ECO	251	Principles of Microeconomics	3
ECO	252	Principles of Macroeconomics	3
GEO	111	World Regional Geography	3
GEO	112	Cultural Geography	3
GEO	113	Economic Geography	3
GEO	130	General Physical Geography	3
HIS	111	World Civilizations I	3
HIS	112	World Civilizations II	3
HIS	115	Intro to Global History	3
HIS	121	Western Civilization I	3
HIS	122	Western Civilization II	3
HIS	131	American History I	3
HIS	132	American History II	3
POL	110	Introduction to Political Science	3
POL	120	American Government	3
POL	210	Comparative Government	3
POL	220	International Relations	3
PSY	150	General Psychology	3
PSY	237	Social Psychology	3
PSY	239	Psychology of Personality	3
PSY	241	Developmental Psychology	3

## Major Electives

Select twenty semester hour credits from the following courses. BUS, CIS, CSC, MKT, SGD, and WEB courses are limited to 9 SHC for each prefix. WBL courses are limited to 8 SHC.

ART	114	Art History Survey I	3
ART	115	Art History Survey II	3
ART	121	Two-Dimensional Design	3
ART	122	Three-Dimensional Design	3
ART	132	Drawing II	3
ART	135	Figure Drawing I	3
ART	171	Computer Art I	3
ART	231	Printmaking I	3
ART	235	Figure Drawing II	3
ART	240	Painting I	3
ART	241	Painting II	3
ART	244	Watercolor	3
ART	250	Surface Design: Textiles	3
ART	261	Photography I	3
ART	262	Photography II	3
ART	264	Digital Photography I	3
ART	265	Digital Photography II	3

ART	266	Videography I	3
ART	267	Videography II	3
ART	281	Sculpture I	3
ART	282	Sculpture II	3
ART	283	Ceramics I	3
ART	288	Studio	3
BUS	110	Introduction to Business	3
BUS	115	Business Law I	3
BUS	121	Business Math	3
BUS	217	Employment Law and Regulations	3
BUS	225	Business Finance	3
BUS	230	Small Business Management	3
BUS	240	Business Ethics	3
BUS	253	Leadership and Management Skills	3
BUS	260	Business Communication	3
BUS	280	REAL Small Business	4
CIS	115	Intro to Programming and Logic	3
CSC	134	C++ Programming	3
CSC	139	Visual BASIC Programming	3
CSC	151	JAVA Programming	3
CSC	153	C# Programming	3
CSC	251	Advanced JAVA Programming	3
CSC	253	Advanced C# Programming	3
DBA	110	Database Concepts	3
GRD	113	History of Graphic Design	3
GRD	117	Design Career Exploration	2
GRD	121	Drawing Fundamentals I	2
GRD	122	Drawing Fundamentals II	2
GRD	132	Illustration II	2
GRD	141	Graphic Design I	4
GRD	142	Graphic Design II	4
GRD	145	Design Applications I	1
GRD	156	Computer Design Apps I	1
GRD	170	Exhibit Design	3
GRD	241	Graphic Design III	4
GRD	260	Digital Processes/Theory	2
GRD	265	Digital Print Production	3
GRD	281	Design of Advertising	2
GRD	282	Advertising Copywriting	2
MKT	120	Principles of Marketing	3
MKT	122	Visual Merchandising	3
MKT	123	Fundamentals of Selling	3
MKT	125	Buying and Merchandising	3
MKT	220	Advertising and Sales Promotion	3
MKT	221	Consumer Behavior	3
MKT	223	Customer Service	3
MKT	224	International Marketing	3
MKT	225	Marketing Research	3
MKT	226	Retail Applications	3
SGD	111	Introduction to Simulation and GameDevelopment	3

SGD	112	Simulation and Game Development Design	3
SGD	113	Simulation and Game Development Programming	3
SGD	212	Simulation and Game Development Design II	3
SGD	289	Simulation and Game Development Project	3
WBL	110	World of Work	1
WBL	111	Work-Based Learning I	1
WBL	112	Work-Based Learning I	2
WBL	121	Work-Based Learning II	1
WBL	122	Work-Based Learning II	2
WBL	131	Work-Based Learning III	1
WEB	110	Internet/Web Fundamentals	3
WEB	111	Introduction to Web Graphics	3
WEB	115	Web Markup and Scripting	3
WEB	120	Introduction to Internet Multimedia	3
WEB	125	Mobile Web Design	3
WEB	140	Web Development Tools	3
WEB	141	Mobile Interface Design	3
WEB	151	Mobile Application Development I	3
WEB	179	JAVA Web Programming	3
WEB	180	Active Server Pages	3
WEB	182	PHP Programming	3
WEB	186	XML Technology	3
WEB	187	Programming for Mobile Devices	3
WEB	210	Web Design	3
WEB	211	Advanced Web Graphics	3
WEB	214	Social Media	3
WEB	215	Advanced Markup and Scripting	3
WEB	220	Advanced Multimedia	3
WEB	225	Content Management Systems	3
WEB	250	Database Driven Websites	3
WEB	251	Mobile Application Development II	3
WEB	285	Emerging Web Technologies	3

**Total semester hour credits to complete degree: 64-66**

**Certificate (C30100)**

<http://www.rccc.edu/catalog-2015-2016/?p=4678>

ART	121	Two-Dimensional Design	3
GRD	110	Typography I	3
GRD	141	Graphic Design I	4
GRD	142	Graphic Design II	4

**Total semester hour credits to complete certificate: 14**

# Air Conditioning, Heating and Refrigeration Technology (35100)

<http://www.rccc.edu/catalog-2015-2016/?p=831>

**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.

**Awards**

- Associate in Applied Science Degree (A35100)
- Diploma (D35100)
- AHR Basic Certificate (C35100BA)
- AHR Comfort Cooling Certificate (C35100CC)
- AHR Commercial Certificate (C35100CO)
- AHR Refrigeration Certificate (C35100RF)
- Advanced Refrigeration Certificate (C35100AR)
- Intermediate Refrigeration Certificate (C35100IR)

**Contact Information**

The Air Conditioning, Heating and Refrigeration Technology (35100) program is in the RCCC Department of Engineering and Business Technologies. For additional information regarding this program, contact the program chair, Joe Christie ([joe.christie@rccc.edu](mailto:joe.christie@rccc.edu)).

**Gainful Employment**

For more information about our graduation rates, the median debt of students who have completed this program and other important information, please view this program in the online RCCC catalog (<http://www.rccc.edu/catalog-2015-2016/?p=831>)

The \* symbol denotes a core course that may not be substituted.

## Associate in Applied Science Degree (A35100)

<http://www.rccc.edu/catalog-2015-2016/?p=1737>

### Course Requirements

The following is a suggested program of study for completing this degree in six semesters. Some students' programs of study may be different, depending on their enrollment status (day, evening, full-time or part-time).

#### First Year Fall

* AHR 110	Introduction to Refrigeration	5
* AHR 111	HVACR Electricity	3
* AHR 112	Heating Technology	4
<b>Total SHC 12</b>		

#### First Year Spring

* AHR 114	Heat Pump Technology	4
AHR 115	Refrigeration Systems	2
* AHR 130	HVAC Controls	3
AHR 160	Refrigerant Certification	1
CIS 110	Introduction to Computers	3
<b>Total SHC 13</b>		

#### First Year Summer

* AHR 113	Comfort Cooling	4
AHR 151	HVAC Duct Systems I	2
* AHR 211	Residential System Design	3
<b>Total SHC 9</b>		

#### Second Year Fall

* AHR 212	Advanced Comfort Systems	4
ENG 111	Writing and Inquiry	3
---	Major Elective	3

Take one of the following courses.

MAT 110	Mathematical Measurement and Literacy	3
PHY 110	Conceptual Physics	3
<b>Total SHC 13</b>		

#### Second Year Spring

AHR 215	Commercial HVAC Controls	2
---	Humanities/Fine Arts Elective	3
---	Social/Behavioral Sciences Elective	3
---	Major Electives	3

Take one of the following courses.

COM 231	Public Speaking	3
ENG 114	Professional Research and Reporting	3
<b>Total SHC 14</b>		

#### Second Year Summer

AHR 152	HVAC Duct Systems II	2
* AHR 213	HVACR Building Code	2
AHR 225	Commercial System Design	3
---	Major Electives	2
<b>Total SHC 9</b>		

#### Major Electives

Select 8 semester hour credits from the following courses

AHR 135	Transport Refrigeration	4
AHR 235	Refrigeration Design	3
AHR 247	Atypical Systems	2
AHR 250	HVAC System Diagnostics	2
AHR 255	Indoor Air Quality	2
AHR 263	Energy Management	2
ALT 120	Renewable Energy Technologies	3
BPR 130	Print Reading-Construction	3
BUS 230	Small Business Management	3
BUS 280	REAL Small Business	4
REF 116	Commercial Systems I	4
REF 117	Refrigeration Controls	4
REF 123	Electrical Devices	4
REF 259	Refrigeration Codes	3
REF 260	Commercial Systems II	4
WBL 111	Work-Based Learning I	1
WBL 112	Work-Based Learning I	2
WLD 112	Basic Welding Processes	2

**Total semester hour credits to complete degree: 70**

## Diploma (D35100)

<http://www.rccc.edu/catalog-2015-2016/?p=846>

### Courses

* AHR 110	Introduction to Refrigeration	5
* AHR 111	HVACR Electricity	3
* AHR 112	Heating Technology	4
* AHR 113	Comfort Cooling	4
* AHR 114	Heat Pump Technology	4
AHR 115	Refrigeration Systems	2
AHR 130	HVAC Controls	3
AHR 151	HVAC Duct Systems I	2
AHR 160	Refrigerant Certification	1
AHR 211	Residential System Design	3
AHR 213	HVACR Building Code	2
CIS 110	Introduction to Computers	3
ENG 111	Writing and Inquiry	3

Take one of the following general education courses.

COM	231	Public Speaking	3
ENG	114	Professional Research and Reporting	3
MAT	110	Math Measurement and Literacy	3
PHY	110	Conceptual Physics	3
---	---	Humanities and Fine Arts Elective	3
---	---	Social and Behavioral Science Elective	3

**Total SHC 42**

### Advanced Refrigeration Certificate (C35100AR)

<http://www.rccc.edu/catalog-2015-2016/?p=3445>

C35100IR is a prerequisite for this certificate.

AHR	110	Introduction to Refrigeration	5
AHR	135	Transport Refrigeration	4
AHR	247	Atypical Systems	2
REF	259	Refrigeration Codes	3
REF	260	Commercial Systems II	4

**Total semester hour credits to complete certificate: 18**

### AHR Basic Certificate (C35100BA)

<http://www.rccc.edu/catalog-2015-2016/?p=1745>

#### Courses

AHR	110	Introduction to Refrigeration	5
AHR	111	HVACR Electricity	3
AHR	112	Heating Technology	4
AHR	151	HVAC Duct Systems I	2

**Total semester hour credits to complete certificate: 14**

### AHR Comfort Cooling Certificate (C35100CC)

<http://www.rccc.edu/catalog-2015-2016/?p=1747>

C35100BA is a prerequisite for this certificate.

#### Courses

AHR	113	Comfort Cooling	4
AHR	114	Heat Pump Technology	4
AHR	130	HVAC Controls	3
AHR	211	Residential System Design	3

**Total semester hour credits to complete certificate: 14**

### AHR Commercial Certificate (C35100CO)

<http://www.rccc.edu/catalog-2015-2016/?p=1751>

C35100BA and C35100CC are prerequisites for this certificate.

#### Courses

AHR	152	HVAC Duct Systems II	2
AHR	160	Refrigerant Certification	1
AHR	212	Advanced Comfort Systems	4
AHR	213	HVACR Building Code	2
AHR	215	Commercial HVAC Controls	2
AHR	225	Commercial System Design	3
AHR	255	Indoor Air Quality	2

**Total semester hour credits to complete certificate: 16**

### AHR Refrigeration Certificate (C35100RF)

<http://www.rccc.edu/catalog-2015-2016/?p=1749>

#### Courses

AHR	110	Introduction to Refrigeration	5
AHR	115	Refrigeration Systems	2
AHR	160	Refrigerant Certification	1
AHR	213	HVACR Building Code	2
AHR	235	Refrigeration Design	3

**Total semester hour credits to complete certificate: 13**

### Intermediate Refrigeration Certificate (C35100IR)

<http://www.rccc.edu/catalog-2015-2016/?p=3452>

C35100BA is a prerequisite for this certificate.

AHR	111	HVACR Electricity	3
AHR	115	Refrigeration Systems	2
REF	116	Commercial Systems I	4
REF	117	Refrigeration Controls	4
REF	123	Electrical Devices	4

**Total semester hour credits to complete certificate: 17**

# Associate Degree Nursing (45110)

<http://www.rccc.edu/catalog-2015-2016/?p=1085>

## 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.

## Awards

- Associate in Applied Science Degree (A45110)

## Additional Information

Note 1 – For students enrolled in the Associate Degree Nursing or the Practical Nursing programs, numerical grades below 'B' in all required nursing courses are considered unsatisfactory attainment of course completion. Note 2 – Class sessions and clinical rotations in NUR courses will be scheduled during weekdays, evenings or weekends.

## Nursing Education Checklist

<http://www.rccc.edu/onestop/87/admissions-checklist-for-nursing-programs/>

## Health Information Sessions

<http://www.rccc.edu/healthpublicservices/information-sessions-for-health-public-services-programs/>

## Admission Requirements

<http://www.rccc.edu/onestop/95/admission-requirements-for-nursing-education-programs/>

## ADN Philosophy

<http://www.rccc.edu/healthpublicservices/associate-degree-nursing-program-philosophy/>

## Attendance Requirements

<http://www.rccc.edu/onestop/120/attendance-requirements-for-nursing-programs/>

## Clinical Behavior Policy

<http://www.rccc.edu/onestop/122/clinical-behavior-policies-for-nursing-programs/>

## Competency Standards

<http://www.rccc.edu/onestop/124/competency-standards-and-progression-policy-for-nursing-programs/>

## Graduation Policy

<http://www.rccc.edu/onestop/129/graduation-policy-for-nursing-programs/>

## Contact Information

The Associate Degree Nursing (45110) program is in the RCCC Department of Health and Education Programs. For additional information regarding this program, contact the director, Cathy Norris ([cathy.norris@rccc.edu](mailto:cathy.norris@rccc.edu)).

## Gainful Employment

For more information about our graduation rates, the median debt of students who have completed this program and other important information, please view this program in the online RCCC catalog (<http://www.rccc.edu/catalog-2015-2016/?p=1085>)

The \* symbol denotes a core course that may not be substituted.

## Associate in Applied Science Degree (A45110)

<http://www.rccc.edu/catalog-2015-2016/?p=1081>

### First Year Fall

BIO	168	Anatomy and Physiology I	4
ENG	111	Writing and Inquiry	3
* NUR	111	Introduction to Health Concepts	8
PSY	150	General Psychology	3
			<b>Total SHC 18</b>

### First Year Spring

BIO	169	Anatomy and Physiology II	4
* NUR	112	Health-Illness Concepts	5
* NUR	211AB	Health Care Concepts, Part A	2.5
PSY	241	Developmental Psychology	3

Take one of the following courses.

ENG	112	Writing and Research in the Disciplines	3
ENG	114	Professional Research and Reporting3	
			<b>Total SHC 17.5</b>

### First Year Summer

* NUR	113	Family Health Concepts	5
* NUR	211BB	Health Care Concepts, Part B	2.5
			<b>Total SHC 7.5</b>

### Second Year Fall

BIO	275	Microbiology	4
* NUR	114	Holistic Health Concepts	5
* NUR	212	Health System Concepts	5
			<b>Total SHC 14</b>

**Second Year Spring**

* NUR	213	Complex Health Concepts	10
--	--	Associate Degree Nursing	
		Humanities/Fine Arts Elective	3

**Total SHC 13**

**Associate Degree Nursing Humanities/Fine Arts Electives**

Take three semester hour credits from the following courses.

ART	111	Art Appreciation	3
ART	114	Art History Survey I	3
ART	115	Art History Survey II	3
HUM	115	Critical Thinking	3
MUS	110	Music Appreciation	3
MUS	112	Introduction to Jazz	3
PHI	240	Introduction to Ethics	3

**Total semester hour credits to complete degree: 70**

**Note 1**

Class sessions and clinical rotations in NUR courses may be scheduled during weekdays, evenings, or weekends.

**Note 2**

For students enrolled in the Associate Degree Nursing or the Practical Nursing programs, numerical grades below 'B' in all required nursing courses are considered unsatisfactory attainment of course competencies.

**Associate in Arts (10100)**

<http://www.rccc.edu/catalog-2015-2016/?p=1558>

**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 includes opportunities for the achievement of competence in reading, writing, oral communication, fundamental mathematical skills, and basic computer use. Academic advisors are available to assist students in selecting courses that best meet students' interests and the requirements of transfer institutions. Because course requirements vary among four-year institutions, students should obtain current catalogs from the schools they plan to attend.

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.

**Awards**

- Associate in Arts Degree (A10100)

**Contact Information**

The Associate in Arts (10100) program is in the RCCC Department of Liberal Arts and General Education. For additional information regarding this program, contact the dean, Carolyn Holbert ([carolyn.holbert@rccc.edu](mailto:carolyn.holbert@rccc.edu)).

**Associate in Arts Premajors**

Beginning with Fall 2014, the Associate in Arts Premajors will no longer be offered as they were discontinued by the North Carolina Community College System. However, students who entered the college Summer 2014 or earlier and are continuing students will be allowed to complete their major using the catalog under which they entered. If you have any questions, please contact the advising center.

The \* symbol denotes a core course that may not be substituted.

**Associate in Arts Degree (A10100)**

<http://www.rccc.edu/catalog-2015-2016/?p=1560>

**General Education Requirements (45 SHC)**

**English Composition**

Take the following courses.

ENG	111	Writing and Inquiry	3
ENG	112	Writing & Research in the Disciplines	3

**Total SHC 6**

**Communications/Humanities/Fine Arts**

Take three courses from the following list from at least two different disciplines (prefixes).

ART	111	Art Appreciation	3
ART	114	Art History Survey I	3
ART	115	Art History Survey II	3
COM	231	Public Speaking	3
ENG	231	American Literature I	3
ENG	232	American Literature II	3
MUS	110	Music Appreciation	3
MUS	112	Introduction to Jazz	3
PHI	240	Introduction to Ethics	3

**Total SHC 9**
**Social/Behavioral Sciences**

Take three courses from the following list from at least two different disciplines (prefixes).

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

**Total SHC 9**
**Math**

Take one course from the following list.

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

**Total SHC 3**
**Natural Sciences**

Take one of the following sets.

*Set One*

AST	111	Descriptive Astronomy	3
AST	111A	Descriptive Astronomy Lab	1

*Set Two*

AST	151	General Astronomy I	3
AST	151A	General Astronomy I Lab	1

*Set Three*

BIO	110	Principles of Biology	4
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*Set Four*

BIO	111	General Biology I	4
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*Set Five*

CHM	151	General Chemistry I	4
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*Set Six*

PHY	110	Conceptual Physics	3
PHY	110A	Conceptual Physics Lab	1

**Total SHC 4**
**Additional General Education Hours**

Take 14 SHC from the following list, or from any courses listed above that are not taken to satisfy the general education requirements .

ANT	210	General Anthropology	3
ANT	220	Cultural Anthropology	3
ANT	221	Comparative Cultures	3
ANT	240	Archaeology	3
ART	116	Survey of American Art	3
AST	152	General Astronomy II	3
AST	152A	General Astronomy II Lab	1
BIO	112	General Biology II	4
BIO	140	Environmental Biology	3
BIO	140A	Environmental Biology Lab	1
CHM	131	Introduction to Chemistry	3
CHM	131A	Introduction to Chemistry Lab	1
CHM	132	Organic and Biochemistry	4
CHM	151	General Chemistry I	4
CHM	152	General Chemistry II	4
CIS	110	Introduction to Computers	3
CIS	115	Intro to Programming & Logic	3
COM	110	Introduction to Communication	3
COM	120	Intro to Interpersonal Comm	3
COM	140	Intro to Intercultural Comm	3
DRA	111	Theatre Appreciation	3
DRA	112	Literature of the Theatre	3
DRA	122	Oral Interpretation	3
DRA	126	Storytelling	3
ECO	151	Survey of Economics	3
ENG	113	Literature-Based Research	3
ENG	114	Professional Research & Reporting	3
ENG	131	Introduction to Literature	3
ENG	241	British Literature I	3
ENG	242	British Literature II	3
ENG	243	Major British Writers	3
ENG	251	Western World Literature I	3
ENG	252	Western World Literature II	3
ENG	261	World Literature I	3
ENG	262	World Literature II	3
FRE	111	Elementary French I	3
FRE	112	Elementary French II	3
GEO	111	World Regional Geography	3
GEO	112	Cultural Geography	3
GEO	130	General Physical Geography	3
GER	111	Elementary German I	3
GER	112	Elementary German II	3
HIS	115	Intro to Global History	3
HIS	121	Western Civilization I	3
HIS	122	Western Civilization II	3
HUM	110	Technology and Society	3
HUM	115	Critical Thinking	3
HUM	120	Cultural Studies	3
HUM	121	The Nature of America	3
HUM	122	Southern Culture	3

HUM 130	Myth in Human Culture	3
HUM 150	American Womens Studies	3
HUM 160	Introduction to Film	3
HUM 161	Advanced Film Studies	3
HUM 211	Humanities I	3
HUM 212	Humanities II	3
MAT 172	Precalculus Trigonometry	4
MAT 263	Brief Calculus	4
MAT 271	Calculus I	4
MAT 272	Calculus II	4
MAT 273	Calculus III	4
MUS 113	American Music	3
MUS 114	Non-Western Music	3
MUS 210	History of Rock Music	3
MUS 212	American Musical Theatre	3
MUS 213	Opera and Musical Theatre	3
PHI 210	History of Philosophy	3
PHI 220	Western Philosophy I	3
PHI 230	Introduction to Logic	3
PHY 151	College Physics I	4
PHY 152	College Physics II	4
PHY 251	General Physics I	4
PHY 252	General Physics II	4
POL 110	Introduction to Political Science	3
POL 210	Comparative Government	3
POL 220	International Relations	3
PSY 237	Social Psychology	3
PSY 239	Psychology of Personality	3
PSY 241	Developmental Psychology	3
PSY 281	Abnormal Psychology	3
REL 110	World Religions	3
REL 211	Introduction to Old Testament	3
REL 212	Introduction to New Testament	3
REL 221	Religion in America	3
SOC 213	Sociology of the Family	3
SOC 220	Social Problems	3
SOC 225	Social Diversity	3
SOC 230	Race and Ethnic Relations	3
SOC 240	Social Psychology	3
SPA 111	Elementary Spanish I	3
SPA 112	Elementary Spanish II	3
SPA 211	Intermediate Spanish I	3
SPA 212	Intermediate Spanish II	3
<b>Total SHC</b>		<b>14</b>

**Other Required Hours (15 SHC)**

**Study Skills**

Take the following course.

ACA 122	College Transfer Success	1
<b>Total SHC</b>		<b>1</b>

**Additional Other Required Hours**

Take 14 SHC from the following courses, or from any of the general education courses listed above not taken to satisfy the general education requirement or the additional general education hours requirement.

ACC 120	Principles of Financial Accounting	4
ACC 121	Principles of Managerial Accounting	4
ANT 240A	Archaeology Field Lab	2
ANT 245	World Prehistory	3
ART 121	Two-Dimensional Design	3
ART 122	Three-Dimensional Design	3
ART 131	Drawing I	3
ART 132	Drawing II	3
ART 135	Figure Drawing I	3
ART 212	Gallery Assistantship I	1
ART 214	Portfolio and Resume	1
ART 231	Printmaking I	3
ART 235	Figure Drawing II	3
ART 240	Painting I	3
ART 241	Painting II	3
ART 244	Watercolor	3
ART 261	Photography I	3
ART 262	Photography II	3
ART 264	Digital Photography I	3
ART 265	Digital Photography II	3
ART 266	Videography I	3
ART 267	Videography II	3
ART 281	Sculpture I	3
ART 282	Sculpture II	3
ART 283	Ceramics I	3
ART 288	Studio	3
AST 251	Observational Astronomy	2
BIO 163	Basic Anatomy and Physiology	5
BIO 168	Anatomy and Physiology I	4
BIO 169	Anatomy and Physiology II	4
BIO 250	Genetics	4
BIO 275	Microbiology	4
BIO 280	Biotechnology	3
BUS 110	Introduction to Business	3
BUS 115	Business Law I	3
BUS 137	Principles of Management	3
CHM 263	Analytical Chemistry	5
CJC 111	Introduction to Criminal Justice	3
CJC 121	Law Enforcement Operations	3
CJC 141	Corrections	3
COM 130	Nonverbal Communication	3
COM 150	Introduction to Mass Communication	3
COM 160	Small Group Communication	3

COM	251	Debate I	3
CSC	134	C++ Programming	3
CSC	139	Visual BASIC Programming	3
CSC	151	JAVA Programming	3
CSC	239	Advanced Visual BASIC Programming	3
DFT	170	Engineering Graphics	3
DRA	130	Acting I	3
DRA	132	Stage Movement	3
DRA	140	Stagecraft I	3
DRA	170	Play Production I	3
ENG	125	Creative Writing I	3
ENG	126	Creative Writing II	3
ENG	132	Introduction to Drama	3
ENG	235	Survey of Film As Lit	3
ENG	272	Southern Literature	3
ENG	273	African-American Literature	3
ENG	274	Literature by Women	3
HEA	110	Personal Health/Wellness	3
HIS	162	Women and History	3
HIS	163	The World Since 1945	3
HIS	221	African-American History	3
HIS	226	The Civil War	3
HIS	236	North Carolina History	3
HIS	260	History of Africa	3
HUM	170	The Holocaust	3
JOU	110	Introduction to Journalism	3
JOU	216	Writing for Mass Media	3
JOU	217	Feature/Editorial Writing	3
MUS	131	Chorus I	1
MUS	132	Chorus II	1
MUS	231	Chorus III	1
MUS	232	Chorus IV	1
PED	110	Fit and Well for Life	2
PED	111	Physical Fitness I	1
PED	113	Aerobics I	1
PED	117	Weight Training I	1
PED	118	Weight Training II	1
PED	120	Walking for Fitness	1
PED	121	Walk, Jog, Run	1
PED	122	Yoga I	1
PED	124	Run, Swim, Cycle	1
PED	128	Golf-Beginning	1
PED	130	Tennis-Beginning	1
PED	142	Lifetime Sports	1
PED	154	Swimming for Fitness	1
PED	217	Pilates I	1
POL	130	State and Local Government	3
PSY	211	Psychology of Adjustment	3
PSY	215	Positive Psychology	3
PSY	231	Forensic Psychology	3

PSY	243	Child Psychology	3
PSY	246	Adolescent Psychology	3
PSY	249	Psychology of Aging	3
PSY	259	Human Sexuality	3
PSY	271	Sports Psychology	3
PSY	275	Health Psychology	3
SOC	234	Sociology of Gender	3
SOC	242	Sociology of Deviance	3
SOC	245	Drugs and Society	3
SOC	250	Sociology of Religion	3
SPA	231	Reading and Composition	3
WBL	111	Work-Based Learning I	1

**Total SHC 1**

### Work-Based Learning (WBL)

Students selecting WBL-111 will be required to complete 15 SHC for Other Required Hours for a total of 61 SHC to earn the Associate in Arts degree since WBL-111 is not a transfer course.

**Total semester hour credits to complete degree: 60-61**

## Associate in Fine Arts (10200)

<http://www.rccc.edu/catalog-2015-2016/?p=1390>

### Description

The Associate in Fine Arts (AFA) degree is designed for students who want to achieve one or more of the following goals: 1) Transfer into a four-year BFA or BAFA program; 2) Earn an Associate's degree that is focused on Fine Arts; 3) Strengthen personal creative work and improve personal portfolio; and/or (4) Explore a variety of creative techniques, mediums, and disciplines.

The AFA degree consists of required core courses in the visual arts and of fine art electives in the visual and performing arts. It also includes opportunities for the achievement of competence in reading, writing, oral communication, fundamental mathematical skills, and the basic use of computers. All of the AFA general education courses are Universal General Education Transfer Courses that are guaranteed to transfer for general education equivalency credit to each of the 16 constituent institutions in the 2014 Comprehensive Articulation Agreement (CAA).

The Fine and Applied Arts Programs offer numerous opportunities for AFA students including two student art exhibitions per year; an active student chorus; internship (WBL: Work-Based Learning) opportunities in the creative industries; field trips to museums, performances, and four-year universities; professional artist lectures; and one-on-one advising with career, transfer, and creative goals. The AFA degree, and /or individual courses, may transfer to four-year institutions through bilateral

agreements between institutions. Please consult with the AFA program chair for additional information. The AFA program chair and advisors will assist students in selecting fine arts courses that best meet students' interests and the requirements of transfer institutions. As requirements vary among four-year institutions, students should obtain current catalogs from the colleges/universities they plan to attend.

**Awards**

- Associate in Fine Arts Degree (A10200)

**Additional Information**

Jenn Selby is the program chair for both the Associate in Fine Arts transfer degree program and the Advertising and Graphic Design Associate in Applied Science degree program.

Fine and Applied Arts Programs Website

<https://www.rccc.edu/finearts/>

Advertising and Graphic Design AAS degree

<https://www.rccc.edu/catalog-2015-2016/5190/5190/>

**Contact Information**

The Associate in Fine Arts (10200) program is in the RCCC Department of Liberal Arts and General Education. For additional information regarding this program, contact the program chair, Jenn Selby (jenn.selby@rccc.edu).

The \* symbol denotes a core course that may not be substituted.

**Associate in Fine Arts Degree (A10200)**

<http://www.rccc.edu/catalog-2015-2016/?p=1322>

**General Education Requirements (28 SHC)**

**History**

Take one of the following courses.

HIS	111	World Civilizations I	3
HIS	112	World Civilizations II	3
HIS	131	American History I	3
HIS	132	American History II	3

**Total SHC 3**

**Social/Behavioral Sciences**

Take two of the following courses.

ECO	251	Principles of Microeconomics	3
ECO	252	Principles of Macroeconomics	3
POL	120	American Government	3
PSY	150	General Psychology	3
SOC	210	Introduction to Sociology	3

**Total SHC 6**

**English Composition**

Take the following courses.

ENG	111	Writing and Inquiry	3
ENG	112	Writing & Research in the Disciplines	3

**Total SHC 6**

**Literature**

Take one of the following courses.

ENG	231	American Literature I	3
ENG	232	American Literature II	3

**Total SHC 3**

**Humanities/Fine Arts**

Take one of the following courses.

ART	111	Art Appreciation	3
COM	231	Public Speaking	3
MUS	110	Music Appreciation	3
MUS	112	Introduction to Jazz	3
PHI	240	Introduction to Ethics	3

**Total SHC 3**

**Natural Sciences**

Take one of the following sets.

*Set One*

AST	111	Descriptive Astronomy	3
AST	111A	Descriptive Astronomy Lab	1

*Set Two*

AST	151	General Astronomy I	3
AST	151A	General Astronomy I Lab	1

*Set Three*

BIO	110	Principles of Biology	4
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*Set Four*

BIO	111	General Biology I	4
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*Set Five*

CHM	151	General Chemistry I	4
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*Set Six*

PHY	110	Conceptual Physics	3
PHY	110A	Conceptual Physics Lab	1

**Total SHC 4**

**Math**

Take one course from the following list.

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

**Total SHC3**

**Other Required Hours (37 SHC)**

**Required ART courses**

Take the following courses.

ART 114	Art History Survey I	3
ART 115	Art History Survey II	3
ART 121	Two-Dimensional Design	3
ART 131	Drawing I	3
<b>Total SHC 12</b>		

**Fine Arts Courses**

Take 24 semester hour credits from the following courses.

ART 116	Survey of American Art	3
ART 117	Non-Western Art History	3
ART 118	Art by Women	3
ART 122	Three-Dimensional Design	3
ART 132	Drawing II	3
ART 135	Figure Drawing I	3
ART 171	Computer Art I	3
ART 212	Gallery Assistantship I	1
ART 214	Portfolio and Resume	1
ART 231	Printmaking I	3
ART 235	Figure Drawing II	3
ART 240	Painting I	3
ART 241	Painting II	3
ART 244	Watercolor	3
ART 250	Surface Design: Textiles	3
ART 261	Photography I	3
ART 262	Photography II	3
ART 264	Digital Photography I	3
ART 265	Digital Photography II	3
ART 266	Videography I	3
ART 267	Videography II	3
ART 281	Sculpture I	3
ART 282	Sculpture II	3
ART 283	Ceramics I	3
ART 284	Ceramics II	3
ART 288	Studio	3
DRA 111	Theatre Appreciation	3
DRA 112	Literature of the Theatre	3
DRA 122	Oral Interpretation	3
DRA 126	Storytelling	3
DRA 130	Acting I	3
DRA 132	Stage Movement	3
DRA 140	Stagecraft I	3
DRA 170	Play Production I	3
MUS 113	American Music	3
MUS 114	Non-Western Music	3
MUS 131	Chorus I	1
MUS 132	Chorus II	1
MUS 210	History of Rock Music	3
MUS 212	American Musical Theatre	3
MUS 213	Opera and Musical Theatre	3

MUS 231	Chorus III	1
MUS 232	Chorus IV	1
<b>Total SHC 24</b>		

**Study Skills/Work-Based Learning course**

Take one of the following courses.

ACA 122	College Transfer Success	1
WBL 111	Work-Based Learning I	1
<b>Total SHC1</b>		

**Total semester hour credits to complete degree: 65**

# Associate in General Education (10300)

<http://www.rccc.edu/catalog-2015-2016/?p=1968>

**Description**

The associate in general education curriculum is designed for the academic enrichment of students who wish to broaden their education, with emphasis on personal interest, growth and development.

Course work includes study in the areas of humanities and fine arts, social and behavioral sciences, natural sciences and mathematics, and English composition. Opportunities for the achievement of competence in reading, writing, oral communication, fundamental mathematical skills, and the basic use of computers will be provided.

Through these skills, students will have a sound base for lifelong learning. Graduates are prepared for advancements within their field of interest and become better qualified for a wide range of employment opportunities.

**Awards**

- Associate in General Education Degree (A10300)

**Contact Information**

The Associate in General Education (10300) program is in the RCCC Department of Health and Education Programs. For additional information regarding this program, contact the dean, Wendy Barnhardt ([wendy.barnhardt@rccc.edu](mailto:wendy.barnhardt@rccc.edu)).

**Gainful Employment**

For more information about our graduation rates, the median debt of students who have completed this program and other important information, please view this program in the online RCCC catalog (<http://www.rccc.edu/catalog-2015-2016/?p=1968>)

The \* symbol denotes a core course that may not be substituted.

**Associate in General Education Degree (A10300)**

<http://www.rccc.edu/catalog-2015-2016/?p=1970>

**General Education Requirements (15 SHC)**

**English Composition**

ENG 111	Writing and Inquiry	3
		<b>Total SHC 3</b>

**Communication**

Take one of the following courses.

COM 110	Introduction to Communication	3
COM 120	Intro to Interpersonal Comm	3
COM 140	Intro to Intercultural Comm	3
COM 231	Public Speaking	3
COM 251	Debate I	3
ENG 112	Writing & Research in the Disciplines	3
ENG 113	Literature-Based Research	3
ENG 114	Professional Research & Reporting	3
		<b>Total SHC 3</b>

**Humanities/Fine Arts**

Take one of the following courses.

ART 111	Art Appreciation	3
ART 114	Art History Survey I	3
ART 115	Art History Survey II	3
ART 116	Survey of American Art	3
ART 117	Non-Western Art History	3
ART 118	Art by Women	3
ART 121	Two-Dimensional Design	3
ART 131	Drawing I	3
ART 132	Drawing II	3
ART 171	Computer Art I	3
ART 240	Painting I	3
ART 241	Painting II	3
ART 244	Watercolor	3
ART 261	Photography I	3
ART 262	Photography II	3
ART 266	Videography I	3
ART 281	Sculpture I	3
ART 283	Ceramics I	3
ART 288	Studio	3
COM 140	Intro to Intercultural Comm	3
DRA 111	Theatre Appreciation	3
DRA 112	Literature of the Theatre	3
DRA 122	Oral Interpretation	3
DRA 126	Storytelling	3
DRA 130	Acting I	3
ENG 125	Creative Writing I	3
ENG 131	Introduction to Literature	3
ENG 132	Introduction to Drama	3
ENG 231	American Literature I	3
ENG 232	American Literature II	3

ENG 241	British Literature I	3
ENG 242	British Literature II	3
ENG 243	Major British Writers	3
ENG 251	Western World Literature I	3
ENG 252	Western World Literature II	3
ENG 261	World Literature I	3
ENG 262	World Literature II	3
ENG 272	Southern Literature	3
ENG 273	African-American Literature	3
ENG 274	Literature by Women	3
HUM 110	Technology and Society	3
HUM 115	Critical Thinking	3
HUM 120	Cultural Studies	3
HUM 121	The Nature of America	3
HUM 122	Southern Culture	3
HUM 130	Myth in Human Culture	3
HUM 150	American Womens Studies	3
HUM 160	Introduction to Film	3
HUM 161	Advanced Film Studies	3
HUM 170	The Holocaust	3
HUM 211	Humanities I	3
HUM 212	Humanities II	3
MUS 110	Music Appreciation	3
MUS 112	Introduction to Jazz	3
MUS 113	American Music	3
MUS 114	Non-Western Music	3
MUS 210	History of Rock Music	3
MUS 212	American Musical Theatre	3
MUS 213	Opera and Musical Theatre	3
PHI 210	History of Philosophy	3
PHI 220	Western Philosophy I	3
PHI 221	Western Philosophy II	3
PHI 230	Introduction to Logic	3
PHI 240	Introduction to Ethics	3
REL 110	World Religions	3
REL 211	Introduction to Old Testament	3
REL 212	Introduction to New Testament	3
REL 221	Religion in America	3
		<b>Total SHC 3</b>

**Social/Behavioral Sciences**

Take one of the following courses.

ANT 210	General Anthropology	3
ANT 220	Cultural Anthropology	3
ANT 221	Comparative Cultures	3
ANT 230	Physical Anthropology	3
ANT 230A	Physical Anthropology Lab	1
ANT 240	Archaeology	3
ANT 240A	Archaeology Field Lab	2
ECO 151	Survey of Economics	3
ECO 251	Principles of Microeconomics	3
ECO 252	Principles of Macroeconomics	3
GEO 111	World Regional Geography	3
GEO 112	Cultural Geography	3

GEO	113	Economic Geography	3
GEO	121	North Carolina Geography	3
GEO	130	General Physical Geography	3
HIS	111	World Civilizations I	3
HIS	112	World Civilizations II	3
HIS	115	Intro to Global History	3
HIS	121	Western Civilization I	3
HIS	122	Western Civilization II	3
HIS	131	American History I	3
HIS	132	American History II	3
HIS	162	Women and History	3
HIS	163	The World Since 1945	3
HIS	221	African-American History	3
HIS	226	The Civil War	3
HIS	236	North Carolina History	3
HIS	260	History of Africa	3
POL	110	Introduction to Political Science	3
POL	120	American Government	3
POL	130	State & Local Government	3
POL	210	Comparative Government	3
POL	220	International Relations	3
PSY	110	Life Span Development	3
PSY	115	Stress Management	2
PSY	118	Interpersonal Psychology	3
PSY	150	General Psychology	3
PSY	211	Psychology of Adjustment	3
PSY	234	Organizational Psychology	3
PSY	237	Social Psychology	3
PSY	239	Psychology of Personality	3
PSY	241	Developmental Psychology	3
PSY	243	Child Psychology	3
PSY	246	Adolescent Psychology	3
PSY	249	Psychology of Aging	3
PSY	259	Human Sexuality	3
PSY	263	Educational Psychology	3
PSY	271	Sports Psychology	3
PSY	275	Health Psychology	3
PSY	281	Abnormal Psychology	3
SOC	210	Introduction to Sociology	3
SOC	213	Sociology of the Family	3
SOC	215	Group Processes	3
SOC	220	Social Problems	3
SOC	225	Social Diversity	3
SOC	230	Race and Ethnic Relations	3
SOC	232	Social Context of Aging	3
SOC	234	Sociology of Gender	3
SOC	240	Social Psychology	3
SOC	242	Sociology of Deviance	3
SOC	244	Sociology of Death & Dying	3
SOC	250	Sociology of Religion	3

**Total SHC 3**

### Natural Sciences/Math

Take 3-4 semester hour credits from the following courses. If CHM 131 is selected, the accompanying lab CHM 131A must also be taken.

AST	111	Descriptive Astronomy	3
AST	151	General Astronomy I	3
BIO	110	Principles of Biology	4
BIO	111	General Biology I	4
BIO	140	Environmental Biology	3
BIO	163	Basic Anatomy & Physiology	5
BIO	168	Anatomy and Physiology I	4
CHM	121	Foundations of Chemistry	3
CHM	131	Introduction to Chemistry	3
CHM	131A	Introduction to Chemistry Lab	1
CHM	151	General Chemistry I	4
MAT	110	Math Measurement and Literacy	3
MAT	121	Algebra/Trigonometry I	3
MAT	143	Quantitative Literacy	3
MAT	152	Statistical Methods I	4
MAT	171	Precalculus Algebra	4
PHY	110	Conceptual Physics	3

**Total SHC 3-4**

### Other Required Hours (49-50 SHC)

Other required hours include additional general education and associate degree level courses. Courses must be at the 110-199 or 210-299 level. A maximum of 7 semester hour credits in health, physical education, college orientation, and/or study skills may be included. Selected topics or seminar courses may be included in a program of study up to a maximum of three semester hour credits. These other required hour courses can be selected from any of the preceding courses not chosen for the general education requirement plus any of the 110-199 or 210-299 level courses with the following prefixes: ACA, ACC, AHR, ALT, ANT, ARC, ART, AST, AUB, AUT, BIO, BPR, BTC, BUS, CAR, CCT, CEG, CHM, CIS, CIV, CJC, CMT, COM, COS, CSC, CST, CTI, CTS, DBA, DDF, DFT, DRA, ECM, ECO, EDU, EGR, EHS, ELC, ELN, EMS, ENG, EPT, ETR, FIP, FRE, GEO, GER, GIS, GRD, HBI, HEA, HIS, HIT, HMT, HSE, HUM, INT, ISC, JOU, MAC, MAT, MEC, MED, MKT, MSM, MUS, NET, NOS, NUR, OMT, OST PED, PHI, PHY, POL, PSY, RAD, REF, REL, SEC, SGD, SOC, SPA, SRV, SST, TRN, WEB, WLD.

# Associate in Science (10400)

<http://www.rccc.edu/catalog-2015-2016/?p=1667>

## Description

The associate in science degree includes opportunities for the achievement of competence in reading, writing, oral communication, fundamental mathematical skills, and basic computer use. Academic advisors are available to assist students in selecting courses that best meet students' interests and the requirements of transfer institutions. Because course requirements vary among four-year institutions, students should obtain current catalogs from the schools they plan to attend.

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.

## Awards

- Associate in Science Degree (A10400)

## Contact Information

The Associate in Science (10400) program is in the RCCC Department of Science, Biotechnology, Mathematics and Information Technologies. For additional information regarding this program, contact the dean, Carol Scherczinger ([carol.scherczinger@rccc.edu](mailto:carol.scherczinger@rccc.edu)).

The \* symbol denotes a core course that may not be substituted.

## Associate in Science Degree (A10400)

<http://www.rccc.edu/catalog-2015-2016/?p=1669>

## General Education Requirements (45 SHC)

### English Composition

Take the following courses.

ENG	111	Writing and Inquiry	3
ENG	112	Writing & Research in the Disciplines	3
			<b>Total SHC 6</b>

### Communications/Humanities/Fine Arts

Take two courses from the following list from at least two different disciplines (prefixes).

ART	111	Art Appreciation	3
ART	114	Art History Survey I	3
ART	115	Art History Survey II	3
COM	231	Public Speaking	3
ENG	231	American Literature I	3
ENG	232	American Literature II	3
MUS	110	Music Appreciation	3
MUS	112	Introduction to Jazz	3
PHI	240	Introduction to Ethics	3

**Total SHC 6**

### Social/Behavioral Sciences

Take two courses from the following list from at least two different disciplines (prefixes).

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

**Total SHC 6**

### Math

Take two courses from the following list.

MAT	171	Precalculus Algebra	4
MAT	172	Precalculus Trigonometry	4
MAT	263	Brief Calculus	4
MAT	271	Calculus I	4

**Total SHC 8**

### Natural Sciences

Take one of the following sets.

#### Set One

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

#### Set Two

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

#### Set Three

PHY	151	College Physics I	4
PHY	152	College Physics II	4

#### Set Four

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

#### Set Five

AST	151	General Astronomy I	3
AST	151A	General Astronomy I Lab	1
BIO	110	Principles of Biology	4

**Set Six**

BIO	110	Principles of Biology	4
PHY	110	Conceptual Physics	3
PHY	110A	Conceptual Physics Lab	1

**Set Seven**

AST	151	General Astronomy I	3
AST	151A	General Astronomy I Lab	1
PHY	110	Conceptual Physics	3
PHY	110A	Conceptual Physics Lab	1

**Total SHC 8**
**Additional General Education Hours**

Take 11 SHC from the following list or from any courses listed above that are not taken to satisfy the general education requirements.

ANT	210	General Anthropology	3
ANT	220	Cultural Anthropology	3
ANT	221	Comparative Cultures	3
ANT	240	Archaeology	3
ART	116	Survey of American Art	3
AST	152	General Astronomy II	3
AST	152A	General Astronomy II Lab	1
BIO	140	Environmental Biology	3
BIO	140A	Environmental Biology Lab	1
CHM	131	Introduction to Chemistry	3
CHM	131A	Introduction to Chemistry Lab	1
CHM	132	Organic and Biochemistry	4
CIS	110	Introduction to Computers	3
CIS	115	Intro to Programming & Logic	3
COM	110	Introduction to Communication	3
COM	120	Intro to Interpersonal Comm	3
COM	140	Intro to Intercultural Comm	3
DRA	111	Theatre Appreciation	3
DRA	112	Literature of the Theatre	3
DRA	122	Oral Interpretation	3
DRA	126	Storytelling	3
ECO	151	Survey of Economics	3
ENG	113	Literature-Based Research	3
ENG	114	Professional Research & Reporting	3
ENG	131	Introduction to Literature	3
ENG	241	British Literature I	3
ENG	242	British Literature II	3
ENG	243	Major British Writers	3
ENG	251	Western World Literature I	3
ENG	252	Western World Literature II	3
ENG	261	World Literature I	3
ENG	262	World Literature II	3
FRE	111	Elementary French I	3
FRE	112	Elementary French II	3
GEO	111	World Regional Geography	3
GEO	112	Cultural Geography	3
GEO	130	General Physical Geography	3
GER	111	Elementary German I	3
GER	112	Elementary German II	3

HIS	115	Intro to Global History	3
HIS	121	Western Civilization I	3
HIS	122	Western Civilization II	3
HUM	110	Technology and Society	3
HUM	115	Critical Thinking	3
HUM	120	Cultural Studies	3
HUM	121	The Nature of America	3
HUM	122	Southern Culture	3
HUM	130	Myth in Human Culture	3
HUM	150	American Womens Studies	3
HUM	160	Introduction to Film	3
HUM	161	Advanced Film Studies	3
HUM	211	Humanities I	3
HUM	212	Humanities II	3
MAT	143	Quantitative Literacy	3
MAT	152	Statistical Methods I	4
MAT	272	Calculus II	4
MAT	273	Calculus III	4
MUS	113	American Music	3
MUS	114	Non-Western Music	3
MUS	210	History of Rock Music	3
MUS	212	American Musical Theatre	3
MUS	213	Opera and Musical Theatre	3
PHI	210	History of Philosophy	3
PHI	220	Western Philosophy I	3
PHI	230	Introduction to Logic	3
POL	110	Introduction to Political Science	3
POL	210	Comparative Government	3
POL	220	International Relations	3
PSY	237	Social Psychology	3
PSY	239	Psychology of Personality	3
PSY	241	Developmental Psychology	3
PSY	281	Abnormal Psychology	3
REL	110	World Religions	3
REL	211	Introduction to Old Testament	3
REL	212	Introduction to New Testament	3
REL	221	Religion in America	3
SOC	213	Sociology of the Family	3
SOC	220	Social Problems	3
SOC	225	Social Diversity	3
SOC	230	Race and Ethnic Relations	3
SOC	240	Social Psychology	3
SPA	111	Elementary Spanish I	3
SPA	112	Elementary Spanish II	3
SPA	211	Intermediate Spanish I	3
SPA	212	Intermediate Spanish II	3

**Total SHC 11**

**Other Required Hours (15 SHC)**

**Study Skills**

Take the following course.

ACA	122	College Transfer Success	1
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**Total SHC 1**

**Additional Other Required Hours**

Take 14 SHC from the following courses or from any of the general education courses listed above not taken to satisfy the general education requirement or the additional general education hours requirement.

ACC	120	Principles of Financial Accounting	4
ACC	121	Principles of Managerial Accounting	4
ANT	240A	Archaeology Field Lab	2
ANT	245	World Prehistory	3
ART	121	Two-Dimensional Design	3
ART	122	Three-Dimensional Design	3
ART	131	Drawing I	3
ART	132	Drawing II	3
ART	135	Figure Drawing I	3
ART	212	Gallery Assistantship I	1
ART	214	Portfolio and Resume	1
ART	231	Printmaking I	3
ART	235	Figure Drawing II	3
ART	240	Painting I	3
ART	241	Painting II	3
ART	244	Watercolor	3
ART	261	Photography I	3
ART	262	Photography II	3
ART	264	Digital Photography I	3
ART	265	Digital Photography II	3
ART	266	Videography I	3
ART	267	Videography II	3
ART	281	Sculpture I	3
ART	282	Sculpture II	3
ART	283	Ceramics I	3
ART	288	Studio	3
AST	251	Observational Astronomy	2
BIO	163	Basic Anatomy and Physiology	5
BIO	168	Anatomy and Physiology I	4
BIO	169	Anatomy and Physiology II	4
BIO	250	Genetics	4
BIO	275	Microbiology	4
BIO	280	Biotechnology	3
BUS	110	Introduction to Business	3
BUS	115	Business Law I	3
BUS	137	Principles of Management	3
CHM	251	Organic Chemistry I	4
CHM	252	Organic Chemistry II	4
CHM	263	Analytical Chemistry	5
CJC	111	Introduction to Criminal Justice	3
CJC	121	Law Enforcement Operations	3
CJC	141	Corrections	3
COM	130	Nonverbal Communication	3

COM	150	Introduction to Mass Communication	3
COM	160	Small Group Communication	3
COM	251	Debate I	3
CSC	134	C++ Programming	3
CSC	139	Visual BASIC Programming	3
CSC	151	JAVA Programming	3
CSC	239	Advanced Visual BASIC Programming	3
DFT	170	Engineering Graphics	3
DRA	130	Acting I	3
DRA	132	Stage Movement	3
DRA	140	Stagecraft I	3
DRA	170	Play Production I	3
ENG	125	Creative Writing I	3
ENG	126	Creative Writing II	3
ENG	132	Introduction to Drama	3
ENG	235	Survey of Film As Lit	3
ENG	272	Southern Literature	3
ENG	273	African-American Literature	3
ENG	274	Literature by Women	3
HEA	110	Personal Health/Wellness	3
HIS	162	Women and History	3
HIS	163	The World Since 1945	3
HIS	221	African-American History	3
HIS	226	The Civil War	3
HIS	236	North Carolina History	3
HIS	260	History of Africa	3
HUM	170	The Holocaust	3
JOU	110	Introduction to Journalism	3
JOU	216	Writing for Mass Media	3
JOU	217	Feature/Editorial Writing	3
MUS	131	Chorus I	1
MUS	132	Chorus II	1
MUS	231	Chorus III	1
MUS	232	Chorus IV	1
PED	110	Fit and Well for Life	2
PED	111	Physical Fitness I	1
PED	113	Aerobics I	1
PED	117	Weight Training I	1
PED	118	Weight Training II	1
PED	120	Walking for Fitness	1
PED	121	Walk, Jog, Run	1
PED	122	Yoga I	1
PED	124	Run, Swim, Cycle	1
PED	128	Golf-Beginning	1
PED	130	Tennis-Beginning	1
PED	142	Lifetime Sports	1
PED	154	Swimming for Fitness	1
PED	217	Pilates I	1
POL	130	State and Local Government	3
PSY	211	Psychology of Adjustment	3
PSY	215	Positive Psychology	3
PSY	231	Forensic Psychology	3
PSY	243	Child Psychology	3
PSY	246	Adolescent Psychology	3

PSY 249	Psychology of Aging	3
PSY 259	Human Sexuality	3
PSY 271	Sports Psychology	3
PSY 275	Health Psychology	3
SOC 234	Sociology of Gender	3
SOC 242	Sociology of Deviance	3
SOC 245	Drugs and Society	3
SOC 250	Sociology of Religion	3
SPA 231	Reading and Composition	3
WBL 111	Work-Based Learning I	1
<b>Total SHC</b>		<b>1</b>

### Work-Based Learning (WBL)

Students selecting WBL-111 will be required to complete 15 SHC for Other Required Hours for a total of 61 SHC to earn the Associate in Science degree since WBL-111 is not a transfer course.

**Total semester hour credits to complete degree: 60-61**

# Automotive Systems Technology (60160)

<http://www.rccc.edu/catalog-2015-2016/?p=722>

### Description

The automotive systems technology curriculum prepares individuals for employment as automotive service technicians. It provides an introduction to automotive careers and increases student awareness of the diverse technologies associated with this dynamic and challenging field.

Coursework 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. Instruction covers rake systems, electrical systems, engine performance, engine repair, suspension and steering, automatic and manual transmission and drive trains, and heating and air condition systems. Students are prepared to apply technical knowledge and skills to repair, service, and maintain all types of automobiles.

Graduates should be prepared to take professional licensure exams and enter careers as entry-level technicians in the transportation industry.

### Awards

- Associate in Applied Science Degree (A60160)
- Diploma (D60160)
- Automotive Electrical and Electronics Certificate (C60160EE)
- Automotive Heating and Air Conditioning Certificate (C60160HA)
- Automotive Management Certificate (C60160AM)
- Brakes Certificate (C60160BR)
- Engine Performance and Engine Repair Certificate (C60160EP)
- Suspension and Steering Certificate (C60160SS)
- Transmissions and Drivetrains Certificate (C60160TD)

### Additional Information

Students must furnish hand tools and protective clothing, as well as textbooks, and may obtain this list from the automotive systems technology program chair or student services.

### Contact Information

The Automotive Systems Technology (60160) program is in the RCCC Department of Academic Programs. For additional information regarding this program, contact the program chair, Wade Vernon ([wade.vernon@rccc.edu](mailto:wade.vernon@rccc.edu)).

### Gainful Employment

For more information about our graduation rates, the median debt of students who have completed this program and other important information, please view this program in the online RCCC catalog (<http://www.rccc.edu/catalog-2015-2016/?p=722>)

The \* symbol denotes a core course that may not be substituted.

## Associate in Applied Science Degree (A60160)

<http://www.rccc.edu/catalog-2015-2016/?p=77>

### First Year Fall

AUT 116	Engine Repair	3
AUT 116A	Engine Repair Lab	1
* TRN 110	Introduction to Transport Technology2	
* TRN 120	Basic Transportation Electricity	5
---	Social/Behavioral Sciences Elective	3

**Total SHC 14**

### First Year Spring

* AUT 141	Suspension and Steering Systems	3
AUT 141A	Suspension and Steering Lab	1
* AUT 151	Brake Systems	3
AUT 151A	Brakes Systems Lab	1
* AUT 181	Engine Performance 1	3
AUT 181A	Engine Performance 1 Lab	1

**Total SHC 12**

**First Year Summer**

* AUT	183	Engine Performance 2	4
* TRN	140	Transportation Climate Control	2
TRN	140A	Transportation Climate Control Lab	2
TRN	170	Pc Skills for Transportation	2
<b>Total SHC</b>			<b>10</b>

**Second Year Fall**

AUT	163	Advanced Automotive Electricity	3
AUT	163A	Advanced Automotive Electricity Lab1	
AUT	231	Manual Transmissions/Transaxles/ Drive Trains	3
AUT	231A	Manual Transmissions/Transaxles/ Drive Trains Lab	1
ENG	111	Writing and Inquiry	3
MAT	110	Mathematical Measurement and Literacy	3
<b>Total SHC</b>			<b>14</b>

**Second Year Spring**

AUT	221	Automatic Transmissions/Transaxles	3
AUT	221A	Automatic Transmissions/Transaxles Lab	1
COM	231	Public Speaking	3
PHY	110	Conceptual Physics	3
PHY	110A	Conceptual Physics Lab	1
--	--	Humanities/Fine Arts Elective	3
<b>Total SHC</b>			<b>14</b>

**Second Year Summer**

TRN	130	Intro to Sustainable Transportation	3
--	--	Major Electives	2
<b>Total SHC</b>			<b>5</b>

**Major Electives**

Take 2 SHC from the following courses. AUT 113, WBL 111, WBL 112, or WBL 121 are recommended. See WBL explanation below.

ACC	115	College Accounting	4
AUB	111	Painting and Refinishing I	4
AUB	121	Non-Structural Damage I	3
AUB	131	Structural Damage I	4
AUT	113	Automotive Servicing I	2
BUS	115	Business Law I	3
BUS	121	Business Math	3
BUS	137	Principles of Management	3
WBL	111	Work-Based Learning I	1
WBL	112	Work-Based Learning I	2
WBL	121	Work-Based Learning II	1
<b>Total SHC</b>			<b>2</b>

**Total semester hour credits to complete degree: 69**

**WBL Explanation**

Students may take either AUT 113 or WBL 112 in the second year summer term. Student may choose to take WBL 111 and WBL 121 instead of taking AUT 113 or WBL 112. WBL can be taken at any time in the curriculum to equal 2 credit hours total.

**Additional Information**

Students must furnish hand tools and protective clothing, as well as textbooks, and may obtain this list from the Automotive Systems Technology program Chair or Student Services.

**Diploma (D60160)**

<http://www.rccc.edu/catalog-2015-2016/?p=112>

**Fall Semester**

AUT	116	Engine Repair	3
AUT	116A	Engine Repair Lab	1
* TRN	110	Introduction to Transport Technology2	2
* TRN	120	Basic Transportation Electricity	5
--	--	Social/Behavioral Sciences Elective	3
<b>Total SHC</b>			<b>14</b>

**Spring Semester**

* AUT	141	Suspension and Steering Systems	3
AUT	141A	Suspension and Steering Lab	1
* AUT	151	Brake Systems	3
AUT	151A	Brakes Systems Lab	1
* AUT	181	Engine Performance 1	3
AUT	181A	Engine Performance 1 Lab	1
ENG	111	Writing and Inquiry	3
<b>Total SHC</b>			<b>15</b>

**Summer Term**

* AUT	183	Engine Performance 2	4
* TRN	140	Transportation Climate Control	2
TRN	140A	Transportation Climate Control Lab	2
<b>Total SHC</b>			<b>8</b>

**Total semester hour credits to complete diploma: 37**

**Additional Information**

Students must furnish hand tools and protective clothing, as well as textbooks, and may obtain this list from the automotive systems technology program chair or student services.

## Automotive Electrical and Electronics Certificate (C60160EE)

<http://www.rccc.edu/catalog-2015-2016/?p=118>

### Courses

AUT	163	Advanced Automotive Electricity	3
AUT	163A	Advanced Automotive Electricity Lab1	
AUT	181	Engine Performance 1	3
AUT	181A	Engine Performance 1 Lab	1
TRN	120	Basic Transportation Electricity	5
TRN	170	Pc Skills for Transportation	2

**Total semester hour credits to complete certificate: 15**

### Additional Information

Students must furnish hand tools and protective clothing, as well as textbooks, and may obtain this list from the automotive systems technology program chair or student services.

## Automotive Heating and Air Conditioning Certificate (C60160HA)

<http://www.rccc.edu/catalog-2015-2016/?p=125>

### Courses

TRN	110	Introduction to Transport Technology2	
TRN	120	Basic Transportation Electricity	5
TRN	140	Transportation Climate Control	2
TRN	140A	Transportation Climate Control Lab 2	
WBL	112	Work-Based Learning I	2

Note: AUT-113 may be substituted for WBL 112

**Total semester hour credits to complete certificate: 13**

### Additional Information

Students must furnish hand tools and protective clothing, as well as textbooks, and may obtain this list from the automotive systems technology program chair or student services.

## Automotive Management Certificate (C60160AM)

<http://www.rccc.edu/catalog-2015-2016/?p=4664>

ACC	115	College Accounting	4
BUS	115	Business Law I	3
BUS	121	Business Math	3
BUS	137	Principles of Management	3
TRN	110	Introduction to Transport Technology2	

**Total semester hour credits to complete certificate: 15**

## Brakes Certificate (C60160BR)

<http://www.rccc.edu/catalog-2015-2016/?p=115>

### Courses

AUT	151	Brake Systems	3
AUT	151A	Brakes Systems Lab	1
AUT	163	Advanced Automotive Electricity	3
AUT	163A	Advanced Automotive Electricity Lab1	
TRN	120	Basic Transportation Electricity	5

**Total semester hour credits to complete certificate: 13**

### Additional Information

Students must furnish hand tools and protective clothing, as well as textbooks, and may obtain this list from the automotive systems technology program chair or student services.

## Engine Performance and Engine Repair Certificate (C60160EP)

<http://www.rccc.edu/catalog-2015-2016/?p=120>

### Courses

AUT	116	Engine Repair	3
AUT	116A	Engine Repair Lab	1
AUT	181	Engine Performance 1	3
AUT	181A	Engine Performance 1 Lab	1
AUT	183	Engine Performance 2	4
TRN	120	Basic Transportation Electricity	5

**Total semester hour credits to complete certificate: 17**

### Additional Information

Students must furnish hand tools and protective clothing, as well as textbooks, and may obtain this list from the automotive systems technology program chair or student services.

## Suspension and Steering Certificate (C60160SS)

<http://www.rccc.edu/catalog-2015-2016/?p=122>

### Courses

AUT	141	Suspension and Steering Systems	3
AUT	141A	Suspension and Steering Lab	1
AUT	151	Brake Systems	3
AUT	151A	Brakes Systems Lab	1
TRN	120	Basic Transportation Electricity	5

**Total semester hour credits to complete certificate: 13**

### Additional Information

Students must furnish hand tools and protective clothing, as well as textbooks, and may obtain this list from the automotive systems technology program chair or student services.

## Transmissions and Drivetrains Certificate (C60160TD)

<http://www.rccc.edu/catalog-2015-2016/?p=3474>

AUT	221	Automatic Transmissions/Transaxles	3
AUT	221A	Automatic Transmissions/Transaxles Lab	1
AUT	231	Manual Transmissions/Transaxles/Drive Trains	3
AUT	231A	Manual Transmissions/Transaxles/Drive Trains Lab	1
TRN	110	Introduction to Transport Technology	2
TRN	120	Basic Transportation Electricity	5

**Total semester hour credits to complete certificate: 15**

### Additional Information

Students must furnish hand tools and protective clothing, as well as textbooks, and may obtain this list from the automotive systems technology program chair or student services.

## Basic Law Enforcement Training (55120)

<http://www.rccc.edu/catalog-2015-2016/?p=632>

### 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.

### Awards

- Certificate (C55120)

### Additional Information

BLET Admission Requirements

<http://www.rccc.edu/onestop/142/basic-law-enforcement-training-blet-admission-requirements/>

### Contact Information

The Basic Law Enforcement Training (55120) program is in the RCCC Department of Public Services. For additional information regarding this program, contact the director, Chris Nesbitt (chris.nesbitt@rccc.edu).

Basic Law Enforcement Training students cannot register for classes during regular registration, arena or online. They must come through our office and are officially registered on the first day of class. For additional information please contact Chris Nesbitt or Gerald W. Krimminger.

### Gainful Employment

For more information about our graduation rates, the median debt of students who have completed this program and other important information, please view this program in the online RCCC catalog (<http://www.rccc.edu/catalog-2015-2016/?p=632>)

The \* symbol denotes a core course that may not be substituted.

## Certificate (C55120)

<http://www.rccc.edu/catalog-2015-2016/?p=455>

### Required Courses

CJC 100 Basic Law Enforcement Training 19

**Total semester hour credits to complete certificate: 19**

### BLET Transfer Credit

Students successfully completing Basic Law Enforcement Training at a school accredited by the N.C Criminal Justice Training and Standards Commission will receive 10 semester hours credit toward their Associate in Applied Science degree in Criminal Justice Technology at Rowan-Cabarrus Community College (RCCC). These students must have successfully completed Basic Law Enforcement Training since 1985. RCCC only ensures acceptance of these transfer credits in our Associate in Applied Science - Criminal Justice Technology degree program. These transfer credits may or may not be accepted by a four-year institution. Students are responsible for checking on the degree requirements of the four-year institution to which they intend to transfer.

## Biotechnology (20100)

<http://www.rccc.edu/catalog-2015-2016/?p=1173>

### Description

The biotechnology curriculum, which has emerged from molecular biology and chemical engineering, is designed to meet the increasing demands for skilled laboratory technicians in various fields of biological and chemical technology.

Course work emphasizes biology, chemistry, mathematics and technical communications. The curriculum objectives are designed to prepare graduates to serve in three distinct capacities: research assistant to a biologist or chemist, laboratory technician or instrumentation technician, and quality control or quality assurance technician.

Graduates may find employment in various areas of industry and government, including research and development, manufacturing, sales and customer service.

### Awards

- Associate in Applied Science Degree (A20100)

### Contact Information

The Biotechnology (20100) program is in the RCCC Department of Science, Biotechnology, Mathematics and Information Technologies. For additional information regarding this program, contact the dean, Carol Scherczinger ([carol.scherczinger@rccc.edu](mailto:carol.scherczinger@rccc.edu)).

## Gainful Employment

For more information about our graduation rates, the median debt of students who have completed this program and other important information, please view this program in the online RCCC catalog (<http://www.rccc.edu/catalog-2015-2016/?p=1173>)

The \* symbol denotes a core course that may not be substituted.

## Associate in Applied Science Degree (A20100)

<http://www.rccc.edu/catalog-2015-2016/?p=203>

### Course Requirements

The following is a suggested program of study for completing this degree in five semesters. Some students' programs of study may be different, depending on their enrollment status (day, evening, full-time or part-time).

#### First Year Fall

* BIO	111	General Biology I	4
CIS	110	Introduction to Computers	3
ENG	111	Writing and Inquiry	3

Take the following math course.

MAT	171	Precalculus Algebra	4
-----	-----	---------------------	---

Take one of the following courses.

ACA	115	Success and Study Skills	1
ACA	122	College Transfer Success	1

**Total SHC 14**

Note: ACA 115 is preferred.

#### First Year Spring

* BIO	112	General Biology II	4
* BTC	181	Basic Laboratory Techniques	4

Take one of the following courses. CHM 131 requires CHM 131A.

* CHM	131	Introduction to Chemistry	3
* CHM	131A	Introduction to Chemistry Lab	1
* CHM	151	General Chemistry I	4

Take one of the following courses.

ENG	112	Writing and Research in the Disciplines	3
ENG	114	Professional Research and Reporting3	

**Total SHC 15**

#### First Year Summer

* BIO	275	Microbiology	4
---	---	Humanities/Fine Arts Elective	3

**Total SHC 7**

#### Second Year Fall

* BIO	250	Genetics	4
BTC	285	Cell Culture	3
* CHM	132	Organic and Biochemistry	4
MAT	152	Statistical Methods I	4

**Total SHC 15**

**Second Year Spring**

BTC	270	Recombinant DNA Technology	4
---	---	Major Electives	8

Take one of the following courses.

PSY	118	Interpersonal Psychology	3
PSY	150	General Psychology	3

**Total SHC 15**

Note: You may only take one of the WBL courses.

**Major Electives**

Take 8 SHC from the following courses.

BIO	140	Environmental Biology	3
BTC	281	Bioprocess Techniques	4
BTC	282	Biotechnology Fermentation I	4
BTC	283	Biotechnology Fermentation II	4
BTC	286	Immunological Techniques	4
BTC	288	Biotech Lab Experience	2
CHM	263	Analytical Chemistry	5
WBL	111	Work-Based Learning I	1
WBL	112	Work-Based Learning I	2

**Total semester hour credits to complete degree: 66**

**Bioprocess Manufacturing Option**

Students wishing to take the Bioprocess Manufacturing Option should select the following sequence for the 2nd Year Spring Semester and 2nd Year Summer Term. Second Year Spring Semester: BTC 270 Recombinant DNA; BTC 281 Bioprocess Techniques; BTC 282 Biotech Fermentation I; and either PSY 118 Interpersonal Psychology OR PSY 150 General Psychology. Second Year Summer Term: BTC 283 Biotech Fermentation II.

**Business Administration (25120)**

<http://www.rccc.edu/catalog-2015-2016/?p=1017>

**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.

**Awards**

- Associate in Applied Science Degree (A25120)
- Diploma (D25120)
- Business Accounting Certificate (C25120BA)
- Business Computing Certificate (C25120BC)
- Business Management Certificate (C25120BM)
- Entrepreneurship Certificate (C25120EN)
- General Business Certificate (C25120GB)
- Small Business Management Certificate (C25120SB)

**Contact Information**

The Business Administration (25120) program is in the RCCC Department of Engineering and Business Technologies. For additional information regarding this program, contact the program chair, Garland Fulp ([garland.fulp@rccc.edu](mailto:garland.fulp@rccc.edu)).

**Gainful Employment**

For more information about our graduation rates, the median debt of students who have completed this program and other important information, please view this program in the online RCCC catalog (<http://www.rccc.edu/catalog-2015-2016/?p=1017>)

The \* symbol denotes a core course that may not be substituted.

**Associate in Applied Science Degree (A25120)**

<http://www.rccc.edu/catalog-2015-2016/?p=272>

**Course Requirements**

The following is a suggested program of study for completing this degree in four semesters. Some students' programs of study may be different, depending on their enrollment status (day, evening, full-time or part-time).

**First Year Fall**

*	BUS	110	Introduction to Business	3
*	CIS	110	Introduction to Computers	3
	ENG	111	Writing and Inquiry	3
	---	---	CORE SUBREQUIREMENT	3

Take one of the following courses.

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

Take one of the following courses.

	ACA	115	Success and Study Skills	1
	ACA	122	College Transfer Success	1

**Total SHC 16-17**

**First Year Spring**

*	ACC	120	Principles of Financial Accounting	4
*	BUS	115	Business Law I	3
	---	---	Humanities/Fine Arts Elective	3

Take one of the following courses.

*	ECO	151	Survey of Economics	3
*	ECO	251	Principles of Microeconomics	3

* ECO	252	Principles of Macroeconomics	3
Take one of the following courses.			
ENG	112	Writing and Research in the Disciplines	3
ENG	113	Literature-Based Research	3
ENG	114	Professional Research and Reporting	3

**Total SHC 16**

**Second Year Fall**

* BUS	137	Principles of Management	3
* MKT	120	Principles of Marketing	3
---	---	Social/Behavioral Sciences Elective	3
---	---	CORE SUBREQUIREMENT	6
---	---	MAJOR ELECTIVES	3

**Total SHC 18**

**Second Year Spring**

---	---	CORE SUBREQUIREMENT	6
---	---	MAJOR ELECTIVES	10

**Total SHC 16**

**CORE SUBREQUIREMENT**

Take 15-16 semester hour credits from one of the following sets. For Business Administration take either BUS-230 or BUS-280, not both. For Marketing take either MKT-123 or MKT-223, not both.

**BUSINESS ADMINISTRATION**

BUS	225	Business Finance	3
BUS	230	Small Business Management	3
BUS	240	Business Ethics	3
BUS	253	Leadership and Management Skills	3
BUS	260	Business Communication	3
BUS	280	REAL Small Business	4

**HUMAN RESOURCES MANAGEMENT**

BUS	217	Employment Law and Regulations	3
BUS	234	Training and Development	3
BUS	256	Recruit, Select, & Pers Planning	3
BUS	258	Compensation and Benefits	3
BUS	259	HRM Applications	3

**INTERNATIONAL BUSINESS GLOBAL**

ACC	270	International Accounting	3
INT	110	International Business	3
INT	210	International Trade	3
INT	220	International Economics	3
INT	230	International Law	3

**MARKETING**

MKT	123	Fundamentals of Selling	3
MKT	220	Advertising and Sales Promotion	3
MKT	223	Customer Service	3
MKT	225	Marketing Research	3
MKT	227	Marketing Applications	3
MKT	232	Social Media Marketing	4

**MAJOR ELECTIVES**

Take 13 SHC from the following courses; ACC 121, CTS 130 and INT 110 are required. For Business, Human Resources and Marketing, select 3 SHC from the courses listed below. For International, select 6 SHC from the courses listed below. WBL is limited to 3 SHC.

ACC	121	Principles of Managerial Accounting	4
ACC	270	International Accounting	3
BUS	121	Business Math	3
BUS	153	Human Resource Management	3
BUS	217	Employment Law and Regulations	3
BUS	225	Business Finance	3
BUS	230	Small Business Management	3
BUS	234	Training and Development	3
BUS	240	Business Ethics	3
BUS	253	Leadership and Management Skills	3
BUS	256	Recruit, Select, & Pers Planning	3
BUS	258	Compensation and Benefits	3
BUS	259	HRM Applications	3
BUS	260	Business Communication	3
BUS	280	REAL Small Business	4
CTS	130	Spreadsheet	3
ECM	210	Introduction to E-Commerce	3
ETR	210	Introduction to Entrepreneurship	3
ETR	215	Law for Entrepreneurs	3
ETR	220	Innovation and Creativity	3
ETR	230	Entrepreneur Marketing	3
ETR	240	Funding for Entrepreneurs	3
ETR	270	Entrepreneurship Issues	3
INT	110	International Business	3
INT	115	Global Communication	3
INT	210	International Trade	3
INT	220	International Economics	3
INT	230	International Law	3
MKT	123	Fundamentals of Selling	3
MKT	220	Advertising and Sales Promotion	3
MKT	223	Customer Service	3
MKT	224	International Marketing	3
MKT	225	Marketing Research	3
MKT	227	Marketing Applications	3
MKT	232	Social Media Marketing	4
OST	136	Word Processing	3
SPA	111	Elementary Spanish I	3
WBL	110	World of Work	1
WBL	111	Work-Based Learning I	1
WBL	112	Work-Based Learning I	2
WBL	113	Work-Based Learning I	3
WBL	121	Work-Based Learning II	1
WBL	122	Work-Based Learning II	2
WBL	131	Work-Based Learning III	1
WEB	214	Social Media	3

**Total semester hour credits to complete degree: 66-67**

## Diploma (D25120)

<http://www.rccc.edu/catalog-2015-2016/?p=299>

### Courses

* ACC	120	Principles of Financial Accounting	4
ACC	121	Principles of Managerial Accounting	4
BUS	110	Introduction to Business	3
* BUS	115	Business Law I	3
BUS	121	Business Math	3
* BUS	137	Principles of Management	3
BUS	260	Business Communication	3
* CIS	110	Introduction to Computers	3
* ECO	151	Survey of Economics	3
ENG	111	Writing and Inquiry	3
* MKT	120	Principles of Marketing	3
--	--	Social/Behavioral Sciences Elective	3

**Total semester hour credits to complete diploma: 38**

## Business Accounting Certificate (C25120BA)

<http://www.rccc.edu/catalog-2015-2016/?p=302>

### Courses

ACC	120	Principles of Financial Accounting	4
BUS	121	Business Math	3
BUS	225	Business Finance	3
BUS	260	Business Communication	3
ENG	111	Writing and Inquiry	3

**Total semester hour credits to complete certificate: 16**

## Business Computing Certificate (C25120BC)

<http://www.rccc.edu/catalog-2015-2016/?p=316>

### Courses

BUS	110	Introduction to Business	3
BUS	260	Business Communication	3
CIS	110	Introduction to Computers	3
CTS	130	Spreadsheet	3
ENG	111	Writing and Inquiry	3
OST	136	Word Processing	3

**Total semester hour credits to complete certificate: 18**

## Business Management Certificate (C25120BM)

<http://www.rccc.edu/catalog-2015-2016/?p=308>

### Courses

BUS	115	Business Law I	3
BUS	137	Principles of Management	3
BUS	153	Human Resource Management	3
BUS	240	Business Ethics	3
BUS	253	Leadership and Management Skills	3

**Total semester hour credits to complete certificate: 15**

## Entrepreneurship Certificate (C25120EN)

<http://www.rccc.edu/catalog-2015-2016/?p=4689>

ACC	120	Principles of Financial Accounting	4
ETR	210	Introduction to Entrepreneurship	3
ETR	220	Innovation and Creativity	3
WEB	214	Social Media	3

Take one of the following courses.

BUS	230	Small Business Management	3
BUS	280	REAL Small Business	4

**Total semester hour credits to complete certificate: 16-17**

## General Business Certificate (C25120GB)

<http://www.rccc.edu/catalog-2015-2016/?p=311>

### Courses

BUS	110	Introduction to Business	3
BUS	121	Business Math	3
BUS	137	Principles of Management	3
BUS	260	Business Communication	3
CIS	110	Introduction to Computers	3
ENG	111	Writing and Inquiry	3

**Total semester hour credits to complete certificate: 18**

## Small Business Management Certificate (C25120SB)

<http://www.rccc.edu/catalog-2015-2016/?p=305>

### Courses

BUS 137	Principles of Management	3
BUS 153	Human Resource Management	3
BUS 230	Small Business Management	3
BUS 240	Business Ethics	3
BUS 253	Leadership and Management Skills	3

**Total semester hour credits to complete certificate: 15**

## Computer Technology Integration (25500)

<http://www.rccc.edu/catalog-2015-2016/?p=2381>

### Description

The computer technology integration (CTI) curriculum prepares graduates for employment as designers, testers, support technicians, administrators, developers, or programmers with organizations that use computers to design, process, manage, and communicate information, depending on the technical path selected within this curriculum.

Course work includes development of a student's ability to communicate and solve technical issues related to information support and services, interactive media, network systems, programming and software development, 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.

### Awards

- Associate in Applied Science (A25500)
- (.dot) .net Programming Diploma (D25500NP)
- Cyber Crime and Digital Forensics Diploma (D25500CF)
- Cyber Security Diploma (D25500CS)
- Emerging Technologies Programming Diploma (D25500ET)
- Healthcare Business Informatics Diploma (D25500HI)
- Information Technology Diploma (D25500IT)
- Mobile Web Technologies Diploma (D25500MW)
- Networking Technology Diploma (D25500NT)
- Web Technologies Diploma (D25500WT)
- (.dot) .net Programming Certificate (C25500NP)
- Advanced (.dot) .net Programming Certificate (C25500AP)
- Advanced Digital Forensics Certificate (C25500AF)

- Advanced Operating Systems Certificate (C25500AS)
- Advanced Web Programming Certificate (C25500AW)
- C-Based Programming Certificate (C25500CP)
- Cisco Networking Certificate (C25500CN)
- Computer Hardware Repair Certificate (C25500CH)
- Computer Technology Essentials Certificate (C25500CT)
- Content Management Certificate (C25500CM)
- Cyber Crime Fundamentals Certificate (C25500CF)
- Cyber Crime Law Certificate (C25500CL)
- Cyber Security Administration Certificate (C25500SA)
- Cyber Security Fundamentals Certificate (C25500CS)
- Cyber Security Technician Certificate (C25500ST)
- Database Management Certificate (C25500DM)
- Database Programming Certificate (C25500DP)
- E-Commerce Certificate (C25500EC)
- Healthcare Management Essentials Certificate (C25500HM)
- IT Support Fundamentals Certificate (C25500IT)
- Internet Programmer Certificate (C25500IP)
- Internet Technologies Certificate (C25500IN)
- Medical Data Management Certificate (C25500MM)
- Medical Data Security Basics Certificate (C25500MS)
- Medical Informatics Essentials Certificate (C25500MI)
- Microsoft Windows Certificate (C25500MW)
- Mobile Device Programming Certificate (C25500MD)
- Mobile Web Design Certificate (C25500MN)
- Mobile Web Design Fundamentals Certificate (C25500WF)
- Mobile Web Introduction Certificate (C25500WI)
- Operating Systems Manager Certificate (C25500OM)
- Oracle Database Programming Certificate (C25500OD)
- Productivity Software Certificate (C25500PS)
- Security Fundamentals Certificate (C25500SF)
- Simulation and Gaming Design Certificate (C25500SD)
- Simulation and Gaming Design Introduction Certificate (C25500SI)
- Simulation and Gaming Fundamentals Certificate (C25500SG)
- Spreadsheet Management Certificate (C25500SM)
- Web Design Tools Certificate (C25500WT)
- Web Designer Certificate (C25500WD)
- Web Multimedia Certificate (C25500WM)
- Web Programming Certificate (C25500WP)

### Contact Information

The Computer Technology Integration (25500) program is in the RCCC Department of Science, Biotechnology, Mathematics and Information Technologies. For additional information regarding this program, contact the program chair, Zackary Hubbard ([zackary.hubbard@rccc.edu](mailto:zackary.hubbard@rccc.edu)).

### Gainful Employment

For more information about our graduation rates, the median debt of students who have completed this program and other important information, please view this program in the online RCCC catalog (<http://www.rccc.edu/catalog-2015-2016/?p=2381>)

The \* symbol denotes a core course that may not be substituted.

## Associate in Applied Science (A25500)

<http://www.rccc.edu/catalog-2015-2016/?p=2414>

The computer technology integration (CTI) degree combined with special skills attained through diplomas prepares individuals with the skills required for employment in entry-level positions with businesses, educational systems and governmental agencies that rely on computer systems to design and manage information. Graduates should qualify for employment as designers, testers, support technicians, administrators, developers or programmers with organizations that use computers to design, process, manage and communicate information, depending on the diploma selected within this curriculum.

### CTI Diplomas

Please see CTI diplomas for more detail and a recommended semester sequence.

### General Education Requirements

ENG	111	Writing and Inquiry	3
ENG	114	Professional Research and Reporting	3
HUM	110	Technology and Society	3
---	---	Social Behavioral Sciences Elective	3

Take one of the following courses.

MAT	110	Mathematical Measurement and Literacy	3
MAT	171	Precalculus Algebra	4

**Total SHC 15**

### Required Core Courses

* CTI	110	Web, Programming, and Database Foundation	3
* CTI	120	Network and Security Foundation	3
* CTS	115	Information Systems Business Concepts	3

Take one of the following groups.

#### Group One\*

CTS	120	Hardware/Software Support	3
* NOS	110	Operating Systems Concepts	3

#### Group Two

* CTS	120	Hardware/Software Support	3
* CTS	220	Advanced Hardware/Software Support	3

### Required Core Courses Interactive Media

Take one of the following courses.

SGD	111	Introduction to Simulation and Game Development	3
WEB	110	Internet/Web Fundamentals	3

Take 9 SHC from the following courses except for the core course selected above.

* SGD	111	Introduction to Simulation and Game Development	3
* SGD	112	Simulation and Game Development Design	3

* SGD	113	Simulation and Game Development Programming	3
* SGD	174	Simulation and Game Level Design	3
* SGD	212	Simulation and Game Development Design II	3
* SGD	274	Simulation and Game Level Design II	3
* SGD	289	Simulation and Game Development Project	3
* WEB	110	Internet/Web Fundamentals	3
* WEB	111	Introduction to Web Graphics	3
* WEB	115	Web Markup and Scripting	3
* WEB	120	Introduction to Internet Multimedia	3
* WEB	125	Mobile Web Design	3
* WEB	140	Web Development Tools	3
* WEB	141	Mobile Interface Design	3
* WEB	151	Mobile Application Development I	3
* WEB	179	JAVA Web Programming	3
* WEB	180	Active Server Pages	3
* WEB	182	PHP Programming	3
* WEB	186	XML Technology	3
* WEB	187	Programming for Mobile Devices	3
* WEB	210	Web Design	3
* WEB	211	Advanced Web Graphics	3
* WEB	214	Social Media	3
* WEB	215	Advanced Markup and Scripting	3
* WEB	220	Advanced Multimedia	3
* WEB	225	Content Management Systems	3
* WEB	250	Database Driven Websites	3
* WEB	251	Mobile Application Development II	3
* WEB	285	Emerging Web Technologies	3
* WEB	287	Web E-Portfolio	2

### Required Core Courses Network Systems

Take one of the following courses.

NET	110	Networking Concepts	3
NET	125	Networking Basics	3
NOS	110	Operating Systems Concepts	3

Take 9 SHC from the following courses except for the core course selected above.

* NET	110	Networking Concepts	3
* NET	125	Networking Basics	3
* NET	126	Routing Basics	3
* NET	175	Wireless Technology	3
* NET	225	Routing and Switching I	3
* NET	226	Routing and Switching II	3
* NET	289	Networking Project	3
* NOS	110	Operating Systems Concepts	3
* NOS	120	Linux/UNIX Single User	3
* NOS	130	Windows Single User	3
* NOS	220	Linux/Unix Administration I	3
* NOS	230	Windows Administration I	3
* NOS	231	Windows Administration II	3

## Required Core Courses Programming and Software Development

Take one of the following courses.

CIS	115	Intro to Programming and Logic	3
CSC	134	C++ Programming	3
CSC	139	Visual BASIC Programming	3
CSC	151	JAVA Programming	3
CSC	153	C# Programming	3
DBA	110	Database Concepts	3

Take 9 SHC from the following courses except for the core course selected above.

*	CIS	110	Introduction to Computers	3
*	CIS	115	Intro to Programming and Logic	3
*	CSC	134	C++ Programming	3
*	CSC	139	Visual BASIC Programming	3
*	CSC	151	JAVA Programming	3
*	CSC	153	C# Programming	3
*	CSC	234	Advanced C++ Programming	3
*	CSC	239	Advanced Visual BASIC Programming	3
*	CSC	251	Advanced JAVA Programming	3
*	CSC	253	Advanced C# Programming	3
*	CSC	289	Programming Capstone Project	3
*	DBA	110	Database Concepts	3
*	DBA	115	Database Applications	3
*	DBA	120	Database Programming I	3
*	DBA	210	Database Administration	3
*	DBA	220	Oracle Database Programming II	3

## Required Core Courses Emerging Information Technology

Take one of the following courses.

CCT	110	Introduction to Cyber Crime	3
HBI	110	Issues and Trends in Healthcare Business Informatics	3
SEC	110	Security Concepts	3

Take 9 SHC from the following courses except for the core course selected above.

*	CCT	110	Introduction to Cyber Crime	3
*	CCT	112	Ethics and High Technology	3
*	CCT	121	Computer Crime Investigation	4
*	CCT	220	Forensic Accounting	4
*	CCT	231	Technology Crimes and Law	3
*	CCT	240	Data Recovery Techniques	3
*	CCT	241	Advanced Data Recovery	3
*	CCT	250	Network Vulnerabilities I	3
*	HBI	110	Issues and Trends in Healthcare Business Informatics	3
*	HBI	113	Survey of Medical Insurance	3
*	HBI	210	Introduction to Health Information Networking	3
*	HBI	230	Infrastructure and Application Support in Healthcare	3
*	HBI	250	Data Management and Utilization	3
*	HBI	289	Healthcare Business Informatics Project	3

*	SEC	110	Security Concepts	3
*	SEC	150	Secure Communications	3
*	SEC	160	Security Administration I	3
*	SEC	210	Intrusion Detection	3

## Major Electives

Take 27 semester hour credits from the following courses or from any core courses not taken to satisfy the core requirements.

CJC	111	Introduction to Criminal Justice	3
CJC	112	Criminology	3
CJC	113	Juvenile Justice	3
CJC	121	Law Enforcement Operations	3
CJC	131	Criminal Law	3
CJC	132	Court Procedure and Evidence	3
CJC	141	Corrections	3
CJC	160	Terrorism: Underlying Issues	3
CJC	212	Ethics and Community Relations	3
CJC	214	Victimology	3
CJC	221	Investigative Principles	4
CJC	223	Organized Crime	3
CJC	231	Constitutional Law	3
CJC	233	Correctional Law	3
CJC	241	Community-Based Corrections	3
CTS	125	Presentation Graphics	3
CTS	130	Spreadsheet	3
CTS	135	Integrated Software Intro	4
CTS	155	Tech Support Functions	3
CTS	210	Computer Ethics	3
CTS	230	Advanced Spreadsheet	3
CTS	240	Project Management	3
CTS	285	Systems Analysis and Design	3
CTS	289	System Support Project	3
ECM	210	Introduction to E-Commerce	3
HIT	110	Fundamentals of Health Information Management	3
HIT	112	Health Law and Ethics	3
HIT	114	Health Data Systems and Standards	3
HMT	110	Introduction to Healthcare Management	3
OST	130	Comprehensive Keyboarding	3
OST	136	Word Processing	3
OST	141	Med Terms I-Med Office	3
OST	142	Med Terms II-Med Office	3
OST	148	Medical Coding Billing and Insurance	3
OST	149	Medical Legal Issues	3
OST	236	Advanced Word Or Information Processing	3
OST	243	Med Office Simulation	3
OST	247	Procedure Coding	2
WBL	111	Work-Based Learning I	1
WBL	112	Work-Based Learning I	2
WBL	113	Work-Based Learning I	3
WBL	114	Work-Based Learning I	4

WBL 121	Work-Based Learning II	1
WBL 122	Work-Based Learning II	2
WBL 123	Work-Based Learning II	3
WBL 131	Work-Based Learning III	1
WBL 132	Work-Based Learning III	2
WBL 211	Work-Based Learning IV	1

**Total semester hour credits to complete degree: 69**

**CTI Diplomas**

Please see CTI diplomas for more detail and a recommended semester sequence.

**Required Core Course Areas**

Select 12 semester hour credits from one of the following areas: Interactive Media-Mobile Web Technologies and Web Technologies diplomas; Network Systems-Networking Technology diploma; Programming and Software Development-(dot).net Programming diploma, Emerging Technologies Programming diploma, and Information Technology diploma; or Emerging Information Technology-Cyber Crime and Digital Forensics diploma, Cyber Security diploma, and Healthcare Business Informatics diploma.

**CTI Diplomas**

Diplomas for the computer technology integration program are (dot) .net Programming (D25500NP), Cyber Crime and Forensics (D25500CF), Cyber Security (D25500CS), Emerging Technologies Programming (D25500ET), Healthcare Business Informatics (D25500HI), Information Technology (D25500IT), Networking Technology (D25500NT), Web Technologies (D25500WT), and Mobile Web Technologies (D25500MW).

**(dot) .net Programming Diploma (D25500NP)**

<http://www.rccc.edu/catalog-2015-2016/?p=2383>

**First Year Fall**

* CTI 110	Web, Programming, and Database Foundation	3
* CTI 120	Network and Security Foundation	3

**Total SHC 6**

**First Year Spring**

CIS 115	Intro to Programming and Logic	3
CSC 139	Visual BASIC Programming	3

**Total SHC 6**

**First Year Summer**

ENG 111	Writing and Inquiry	3
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Take one of the following courses.

MAT 110	Mathematical Measurement and Literacy	3
MAT 171	Precalculus Algebra	4

**Total SHC 6**

**Second Year Fall**

CSC 153	C# Programming	3
CSC 239	Advanced Visual BASIC Programming	3
DBA 120	Database Programming I	3

**Total SHC 9**

**Second Year Spring**

CSC 253	Advanced C# Programming	3
CTS 285	Systems Analysis and Design	3
WEB 180	Active Server Pages	3

**Total SHC 6**

**To obtain the A25500 AAS degree in addition to the D25500NP diploma, take the following courses.**

**First Year Fall**

CIS 110	Introduction to Computers	3
CTS 115	Information Systems Business Concepts	3
HUM 110	Technology and Society	3

**Total SHC 9**

**First Year Spring**

* CTS 120	Hardware/Software Support	3
* CTS 220	Advanced Hardware/Software Support	3
* DBA 110	Database Concepts	3

**Total SHC 9**

Note: CTS 120 will be in the first 8 week minimester, and CTS 220 will be in the second 8 week minimester.

**First Year Summer**

WEB 140	Web Development Tools	3
---	Major Electives	3

**Total SHC 6**

**Second Year Fall**

---	Major Electives	3
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**Total SHC 3**

**Second Year Spring**

ENG 114	Professional Research and Reporting	3
---	Social/Behavioral Sciences Elective	3

**Total SHC 9**

**Major Electives**

Take nine semester hour credits from the following courses except those that are also listed above.

CCT 110	Introduction to Cyber Crime	3
CCT 112	Ethics and High Technology	3
CCT 121	Computer Crime Investigation	4
CCT 220	Forensic Accounting	4

ROWAN-CABARRUS COMMUNITY COLLEGE

CCT	231	Technology Crimes and Law	3	HIT	110	Fundamentals of Health Information Management	3
CCT	240	Data Recovery Techniques	3	HIT	112	Health Law and Ethics	3
CCT	241	Advanced Data Recovery	3	HIT	114	Health Data Systems and Standards	3
CCT	250	Network Vulnerabilities I	3	HMT	110	Introduction to Healthcare Management	3
CIS	110	Introduction to Computers	3	NET	110	Networking Concepts	3
CIS	115	Intro to Programming and Logic	3	NET	125	Networking Basics	3
CJC	111	Introduction to Criminal Justice	3	NET	126	Routing Basics	3
CJC	112	Criminology	3	NET	175	Wireless Technology	3
CJC	113	Juvenile Justice	3	NET	225	Routing and Switching I	3
CJC	121	Law Enforcement Operations	3	NET	226	Routing and Switching II	3
CJC	131	Criminal Law	3	NET	289	Networking Project	3
CJC	132	Court Procedure and Evidence	3	NOS	110	Operating Systems Concepts	3
CJC	141	Corrections	3	NOS	120	Linux/UNIX Single User	3
CJC	160	Terrorism: Underlying Issues	3	NOS	130	Windows Single User	3
CJC	212	Ethics and Community Relations	3	NOS	220	Linux/Unix Administration I	3
CJC	214	Victimology	3	NOS	230	Windows Administration I	3
CJC	221	Investigative Principles	4	NOS	231	Windows Administration II	3
CJC	223	Organized Crime	3	OST	130	Comprehensive Keyboarding	3
CJC	231	Constitutional Law	3	OST	136	Word Processing	3
CJC	233	Correctional Law	3	OST	141	Med Terms I-Med Office	3
CJC	241	Community-Based Corrections	3	OST	142	Med Terms II-Med Office	3
CSC	134	C++ Programming	3	OST	148	Medical Coding Billing and Insurance	3
CSC	139	Visual BASIC Programming	3	OST	149	Medical Legal Issues	3
CSC	151	JAVA Programming	3	OST	236	Advanced Word Or Information Processsing	3
CSC	153	C# Programming	3	OST	243	Med Office Simulation	3
CSC	234	Advanced C++ Programming	3	OST	247	Procedure Coding	2
CSC	239	Advanced Visual BASIC Programming	3	SEC	110	Security Concepts	3
CSC	251	Advanced JAVA Programming	3	SEC	150	Secure Communications	3
CSC	253	Advanced C# Programming	3	SEC	160	Security Administration I	3
CSC	289	Programming Capstone Project	3	SEC	210	Intrusion Detection	3
CTS	125	Presentation Graphics	3	SGD	111	Introduction to Simulation and Game Development	3
CTS	130	Spreadsheet	3	SGD	112	Simulation and Game Development Design	3
CTS	135	Integrated Software Intro	4	SGD	113	Simulation and Game Development Programming	3
CTS	155	Tech Support Functions	3	SGD	174	Simulation and Game Level Design	3
CTS	210	Computer Ethics	3	SGD	212	Simulation and Game Development Design II	3
CTS	230	Advanced Spreadsheet	3	SGD	274	Simulation and Game Level Design II	3
CTS	240	Project Management	3	SGD	289	Simulation and Game Development Project	3
CTS	285	Systems Analysis and Design	3	WBL	111	Work-Based Learning I	1
CTS	289	System Support Project	3	WBL	112	Work-Based Learning I	2
DBA	110	Database Concepts	3	WBL	113	Work-Based Learning I	3
DBA	115	Database Applications	3	WBL	114	Work-Based Learning I	4
DBA	120	Database Programming I	3	WBL	121	Work-Based Learning II	1
DBA	210	Database Administration	3	WBL	122	Work-Based Learning II	2
DBA	220	Oracle Database Programming II	3	WBL	123	Work-Based Learning II	3
ECM	210	Introduction to E-Commerce	3	WBL	131	Work-Based Learning III	1
HBI	110	Issues and Trends in Healthcare Business Informatics	3	WBL	132	Work-Based Learning III	2
HBI	113	Survey of Medical Insurance	3	WBL	211	Work-Based Learning IV	1
HBI	210	Introduction to Health Information Networking	3				
HBI	230	Infrastructure and Application Support in Healthcare	3				
HBI	250	Data Management and Utilization	3				
HBI	289	Healthcare Business Informatics Project	3				

WEB 110	Internet/Web Fundamentals	3
WEB 111	Introduction to Web Graphics	3
WEB 115	Web Markup and Scripting	3
WEB 120	Introduction to Internet Multimedia	3
WEB 125	Mobile Web Design	3
WEB 140	Web Development Tools	3
WEB 141	Mobile Interface Design	3
WEB 151	Mobile Application Development I	3
WEB 179	JAVA Web Programming	3
WEB 180	Active Server Pages	3
WEB 182	PHP Programming	3
WEB 186	XML Technology	3
WEB 187	Programming for Mobile Devices	3
WEB 210	Web Design	3
WEB 211	Advanced Web Graphics	3
WEB 214	Social Media	3
WEB 215	Advanced Markup and Scripting	3
WEB 220	Advanced Multimedia	3
WEB 225	Content Management Systems	3
WEB 250	Database Driven Websites	3
WEB 251	Mobile Application Development II	3
WEB 285	Emerging Web Technologies	3
WEB 287	Web E-Portfolio	2

**Total semester hour credits to complete degree: 69**

### Cyber Crime and Digital Forensics Diploma (D25500CF)

<http://www.rccc.edu/catalog-2015-2016/?p=2399>

#### First Year Fall

CCT 110	Introduction to Cyber Crime	3
* CTI 110	Web, Programming, and Database Foundation	3
* CTI 120	Network and Security Foundation	3
HUM 110	Technology and Society	3

**Total SHC 12**

#### First Year Spring

CCT 112	Ethics and High Technology	3
CCT 121	Computer Crime Investigation	4
ENG 111	Writing and Inquiry	3
SEC 110	Security Concepts	3

**Total SHC 13**

#### Second Year Fall

CCT 220	Forensic Accounting	4
CCT 240	Data Recovery Techniques	3
CCT 241	Advanced Data Recovery	3
NOS 110	Operating Systems Concepts	3

**Total SHC 13**

**To obtain the A25500 AAS degree in addition to the D25500CF diploma, take the following courses.**

#### First Year Fall

CIS 110	Introduction to Computers	3
		<b>Total SHC 3</b>

#### First Year Spring

CTS 120	Hardware/Software Support	3
		<b>Total SHC 3</b>

#### First Year Summer

CCT 231	Technology Crimes and Law	3
CTS 115	Information Systems Business Concepts	3
ENG 114	Professional Research and Reporting	3
---	Social/Behavioral Sciences Elective	3
		<b>Total SHC 12</b>

#### Second Year Fall

NET 110	Networking Concepts	3
		<b>Total SHC 3</b>

#### Second Year Spring

CCT 250	Network Vulnerabilities I	3
CJC 132	Court Procedure and Evidence	3
---	Major Electives	3

Take one of the following courses.

MAT 110	Mathematical Measurement and Literacy	3
MAT 171	Precalculus Algebra	4

**Total SHC 12-13**

#### Major Electives

Take three semester hour credits from the following courses except those that are also listed above.

CCT 110	Introduction to Cyber Crime	3
CCT 112	Ethics and High Technology	3
CCT 121	Computer Crime Investigation	4
CCT 220	Forensic Accounting	4
CCT 231	Technology Crimes and Law	3
CCT 240	Data Recovery Techniques	3
CCT 241	Advanced Data Recovery	3
CCT 250	Network Vulnerabilities I	3
CIS 110	Introduction to Computers	3
CIS 115	Intro to Programming and Logic	3
CJC 111	Introduction to Criminal Justice	3
CJC 112	Criminology	3
CJC 113	Juvenile Justice	3
CJC 121	Law Enforcement Operations	3
CJC 131	Criminal Law	3
CJC 132	Court Procedure and Evidence	3

CJC	141	Corrections	3	NET	226	Routing and Switching II	3
CJC	160	Terrorism: Underlying Issues	3	NET	289	Networking Project	3
CJC	212	Ethics and Community Relations	3	NOS	110	Operating Systems Concepts	3
CJC	214	Victimology	3	NOS	120	Linux/UNIX Single User	3
CJC	221	Investigative Principles	4	NOS	130	Windows Single User	3
CJC	223	Organized Crime	3	NOS	220	Linux/Unix Administration I	3
CJC	231	Constitutional Law	3	NOS	230	Windows Administration I	3
CJC	233	Correctional Law	3	NOS	231	Windows Administration II	3
CJC	241	Community-Based Corrections	3	OST	130	Comprehensive Keyboarding	3
CSC	134	C++ Programming	3	OST	136	Word Processing	3
CSC	139	Visual BASIC Programming	3	OST	141	Med Terms I-Med Office	3
CSC	151	JAVA Programming	3	OST	142	Med Terms II-Med Office	3
CSC	153	C# Programming	3	OST	148	Medical Coding Billing and Insurance	3
CSC	234	Advanced C++ Programming	3	OST	149	Medical Legal Issues	3
CSC	239	Advanced Visual BASIC Programming	3	OST	236	Advanced Word Or Information	3
CSC	251	Advanced JAVA Programming	3			Processsing	3
CSC	253	Advanced C# Programming	3	OST	243	Med Office Simulation	3
CSC	289	Programming Capstone Project	3	OST	247	Procedure Coding	2
CTS	125	Presentation Graphics	3	SEC	110	Security Concepts	3
CTS	130	Spreadsheet	3	SEC	150	Secure Communications	3
CTS	135	Integrated Software Intro	4	SEC	160	Security Administration I	3
CTS	155	Tech Support Functions	3	SEC	210	Intrusion Detection	3
CTS	210	Computer Ethics	3	SGD	111	Introduction to Simulation and	3
CTS	230	Advanced Spreadsheet	3			Game Development	3
CTS	240	Project Management	3	SGD	112	Simulation and Game Development	3
CTS	285	Systems Analysis and Design	3			Design	3
CTS	289	System Support Project	3	SGD	113	Simulation and Game Development	3
DBA	110	Database Concepts	3			Programming	3
DBA	115	Database Applications	3	SGD	174	Simulation and Game Level Design	3
DBA	120	Database Programming I	3	SGD	212	Simulation and Game Development	3
DBA	210	Database Administration	3			Design II	3
DBA	220	Oracle Database Programming II	3	SGD	274	Simulation and Game Level Design II	3
ECM	210	Introduction to E-Commerce	3	SGD	289	Simulation and Game Development	3
HBI	110	Issues and Trends in Healthcare	3			Project	3
		Business Informatics	3	WBL	111	Work-Based Learning I	1
HBI	113	Survey of Medical Insurance	3	WBL	112	Work-Based Learning I	2
HBI	210	Introduction to Health Information	3	WBL	113	Work-Based Learning I	3
		Networking	3	WBL	114	Work-Based Learning I	4
HBI	230	Infrastructure and Application	3	WBL	121	Work-Based Learning II	1
		Supportin Healthcare	3	WBL	122	Work-Based Learning II	2
HBI	250	Data Management and Utilization	3	WBL	123	Work-Based Learning II	3
HBI	289	Heathcare Business Informatics	3	WBL	131	Work-Based Learning III	1
		Project	3	WBL	132	Work-Based Learning III	2
HIT	110	Fundamentals of Health Information	3	WBL	211	Work-Based Learning IV	1
		Management	3	WEB	110	Internet/Web Fundamentals	3
HIT	112	Health Law and Ethics	3	WEB	111	Introduction to Web Graphics	3
HIT	114	Health Data Systems and Standards	3	WEB	115	Web Markup and Scripting	3
HMT	110	Introduction to Healthcare	3	WEB	120	Introduction to Internet Multimedia	3
		Management	3	WEB	125	Mobile Web Design	3
NET	110	Networking Concepts	3	WEB	140	Web Development Tools	3
NET	125	Networking Basics	3	WEB	141	Mobile Interface Design	3
NET	126	Routing Basics	3	WEB	151	Mobile Application Development I	3
NET	175	Wireless Technology	3	WEB	179	JAVA Web Programming	3
NET	225	Routing and Switching I	3	WEB	180	Active Server Pages	3

WEB 182	PHP Programming	3
WEB 186	XML Technology	3
WEB 187	Programming for Mobile Devices	3
WEB 210	Web Design	3
WEB 211	Advanced Web Graphics	3
WEB 214	Social Media	3
WEB 215	Advanced Markup and Scripting	3
WEB 220	Advanced Multimedia	3
WEB 225	Content Management Systems	3
WEB 250	Database Driven Websites	3
WEB 251	Mobile Application Development II	3
WEB 285	Emerging Web Technologies	3
WEB 287	Web E-Portfolio	2

**Total semester hour credits to complete degree: 69**

### Cyber Security Diploma (D25500CS)

<http://www.rccc.edu/catalog-2015-2016/?p=2397>

#### First Year Fall

* CTI 110	Web, Programming, and Database Foundation	3
* CTI 120	Network and Security Foundation	3
NET 125	Networking Basics	3
NET 126	Routing Basics	3

**Total SHC 12**

Note: NET 125 will be taught during the 1st 8 weeks; NET 126 will be taught during the 2nd 8 weeks.

#### First Year Spring

ENG 111	Writing and Inquiry	3
NOS 110	Operating Systems Concepts	3
SEC 110	Security Concepts	3
SEC 150	Secure Communications	3

**Total SHC 12**

#### First Year Summer

HUM 110	Technology and Society	3
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**Total SHC 3**

#### Second Year Fall

NOS 120	Linux/UNIX Single User	3
SEC 160	Security Administration I	3
SEC 210	Intrusion Detection	3

**Total SHC 9**

Note: SEC 160 and NOS 120 will be taught during the 1st 8 weeks; SEC 210 will be taught during the 2nd 8 weeks.

**To obtain the A25500 AAS degree in addition to the D25500CS diploma, take the following courses.**

#### First Year Fall

CIS 110	Introduction to Computers	3
		<b>Total SHC 3</b>

#### First Year Spring

NET 225	Routing and Switching I	3
NET 226	Routing and Switching II	3
		<b>Total SHC 6</b>

Note: NET 225 will be taught during the 1st 8 weeks; NET 226 will be taught during the 2nd 8 weeks.

#### First Year Summer

* CTS 115	Information Systems Business Concepts	3
ENG 114	Professional Research and Reporting	3
---	Major Electives	3
		<b>Total SHC 9</b>

#### Second Year Fall

NOS 220	Linux/Unix Administration I	3
		<b>Total SHC 3</b>

Note: NOS 220 will be taught during the 2nd 8 weeks.

#### Second Year Spring

CCT 112	Ethics and High Technology	3
* CTS 120	Hardware/Software Support	3
---	Social/Behavioral Sciences Elective	3

Take one of the following courses.

MAT 110	Mathematical Measurement and Literacy	3
MAT 171	Precalculus Algebra	4

**Total SHC 12-13**

#### Major Electives

Take three semester hour credits from the following courses except those that are also listed above.

CCT 110	Introduction to Cyber Crime	3
CCT 112	Ethics and High Technology	3
CCT 121	Computer Crime Investigation	4
CCT 220	Forensic Accounting	4
CCT 231	Technology Crimes and Law	3
CCT 240	Data Recovery Techniques	3
CCT 241	Advanced Data Recovery	3
CCT 250	Network Vulnerabilities I	3
CIS 110	Introduction to Computers	3
CIS 115	Intro to Programming and Logic	3
CJC 111	Introduction to Criminal Justice	3
CJC 112	Criminology	3
CJC 113	Juvenile Justice	3
CJC 121	Law Enforcement Operations	3
CJC 131	Criminal Law	3

CJC	132	Court Procedure and Evidence	3	NET	226	Routing and Switching II	3
CJC	141	Corrections	3	NET	289	Networking Project	3
CJC	160	Terrorism: Underlying Issues	3	NOS	110	Operating Systems Concepts	3
CJC	212	Ethics and Community Relations	3	NOS	120	Linux/UNIX Single User	3
CJC	214	Victimology	3	NOS	130	Windows Single User	3
CJC	221	Investigative Principles	4	NOS	220	Linux/Unix Administration I	3
CJC	223	Organized Crime	3	NOS	230	Windows Administration I	3
CJC	231	Constitutional Law	3	NOS	231	Windows Administration II	3
CJC	233	Correctional Law	3	OST	130	Comprehensive Keyboarding	3
CJC	241	Community-Based Corrections	3	OST	136	Word Processing	3
CSC	134	C++ Programming	3	OST	141	Med Terms I-Med Office	3
CSC	139	Visual BASIC Programming	3	OST	142	Med Terms II-Med Office	3
CSC	151	JAVA Programming	3	OST	148	Medical Coding Billing and Insurance	3
CSC	153	C# Programming	3	OST	149	Medical Legal Issues	3
CSC	234	Advanced C++ Programming	3	OST	236	Advanced Word Or Information	3
CSC	239	Advanced Visual BASIC Programming	3			Processing	3
CSC	251	Advanced JAVA Programming	3	OST	243	Med Office Simulation	3
CSC	253	Advanced C# Programming	3	OST	247	Procedure Coding	2
CSC	289	Programming Capstone Project	3	SEC	110	Security Concepts	3
CTS	125	Presentation Graphics	3	SEC	150	Secure Communications	3
CTS	130	Spreadsheet	3	SEC	160	Security Administration I	3
CTS	135	Integrated Software Intro	4	SEC	210	Intrusion Detection	3
CTS	155	Tech Support Functions	3	SGD	111	Introduction to Simulation and	3
CTS	210	Computer Ethics	3			Game Development	3
CTS	230	Advanced Spreadsheet	3	SGD	112	Simulation and Game Development	3
CTS	240	Project Management	3			Design	3
CTS	285	Systems Analysis and Design	3	SGD	113	Simulation and Game Development	3
CTS	289	System Support Project	3			Programming	3
DBA	110	Database Concepts	3	SGD	174	Simulation and Game Level Design	3
DBA	115	Database Applications	3	SGD	212	Simulation and Game Development	3
DBA	120	Database Programming I	3			Design II	3
DBA	210	Database Administration	3	SGD	274	Simulation and Game Level Design II	3
DBA	220	Oracle Database Programming II	3	SGD	289	Simulation and Game Development	3
ECM	210	Introduction to E-Commerce	3			Project	3
HBI	110	Issues and Trends in Healthcare	3	WBL	111	Work-Based Learning I	1
		Business Informatics	3	WBL	112	Work-Based Learning I	2
HBI	113	Survey of Medical Insurance	3	WBL	113	Work-Based Learning I	3
HBI	210	Introduction to Health Information	3	WBL	114	Work-Based Learning I	4
		Networking	3	WBL	121	Work-Based Learning II	1
HBI	230	Infrastructure and Application	3	WBL	122	Work-Based Learning II	2
		Supportin Healthcare	3	WBL	123	Work-Based Learning II	3
HBI	250	Data Management and Utilization	3	WBL	131	Work-Based Learning III	1
HBI	289	Heathcare Business Informatics	3	WBL	132	Work-Based Learning III	2
		Project	3	WBL	211	Work-Based Learning IV	1
HIT	110	Fundamentals of Health Information	3	WEB	110	Internet/Web Fundamentals	3
		Management	3	WEB	111	Introduction to Web Graphics	3
HIT	112	Health Law and Ethics	3	WEB	115	Web Markup and Scripting	3
HIT	114	Health Data Systems and Standards	3	WEB	120	Introduction to Internet Multimedia	3
HMT	110	Introduction to Healthcare	3	WEB	125	Mobile Web Design	3
		Management	3	WEB	140	Web Development Tools	3
NET	110	Networking Concepts	3	WEB	141	Mobile Interface Design	3
NET	125	Networking Basics	3	WEB	151	Mobile Application Development I	3
NET	126	Routing Basics	3	WEB	179	JAVA Web Programming	3
NET	175	Wireless Technology	3	WEB	180	Active Server Pages	3
NET	225	Routing and Switching I	3				

WEB 182	PHP Programming	3
WEB 186	XML Technology	3
WEB 187	Programming for Mobile Devices	3
WEB 210	Web Design	3
WEB 211	Advanced Web Graphics	3
WEB 214	Social Media	3
WEB 215	Advanced Markup and Scripting	3
WEB 220	Advanced Multimedia	3
WEB 225	Content Management Systems	3
WEB 250	Database Driven Websites	3
WEB 251	Mobile Application Development II	3
WEB 285	Emerging Web Technologies	3
WEB 287	Web E-Portfolio	2

**Total semester hour credits to complete degree: 69-70**

### Emerging Technologies Programming Diploma (D25500ET)

<http://www.rccc.edu/catalog-2015-2016/?p=2409>

#### First Year Fall

* CTI 110	Web, Programming, and Database Foundation	3
* CTI 120	Network and Security Foundation	3
		<b>Total SHC 6</b>

#### First Year Spring

CIS 115	Intro to Programming and Logic	3
CSC 134	C++ Programming	3
		<b>Total SHC 6</b>

#### First Year Summer

ENG 111	Writing and Inquiry	3
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Take one of the following courses.

MAT 110	Mathematical Measurement and Literacy	3
MAT 171	Precalculus Algebra	4
		<b>Total SHC 6</b>

#### Second Year Fall

CSC 151	JAVA Programming	3
CSC 234	Advanced C++ Programming	3
DBA 120	Database Programming I	3
WEB 182	PHP Programming	3
		<b>Total SHC 12</b>

#### Second Year Spring

CSC 251	Advanced JAVA Programming	3
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Take one of the following courses.

WEB 179	JAVA Web Programming	3
WEB 187	Programming for Mobile Devices	3
		<b>Total SHC 6</b>

**To obtain the A25500 AAS degree in addition to the D25500ET diploma, take the following courses.**

#### First Year Fall

CIS 110	Introduction to Computers	3
CTS 115	Information Systems Business Concepts	3
HUM 110	Technology and Society	3
		<b>Total SHC 9</b>

#### First Year Spring

CTS 120	Hardware/Software Support	3
CTS 220	Advanced Hardware/Software Support	3
DBA 110	Database Concepts	3
		<b>Total SHC 9</b>

Note: CTS 120 will be in the first 8 week minimester, and CTS 220 will be in the second 8 week minimester.

#### First Year Summer

WEB 140	Web Development Tools	3
-- --	Major Electives	3
		<b>Total SHC 6</b>

#### Second Year Spring

ENG 114	Professional Research and Reporting	3
-- --	Social/Behavioral Sciences Elective	3
-- --	Major Electives	3
		<b>Total SHC 9</b>

#### Major Electives

Take six semester hour credits from the following courses except those that are also listed above.

CCT 110	Introduction to Cyber Crime	3
CCT 112	Ethics and High Technology	3
CCT 121	Computer Crime Investigation	4
CCT 220	Forensic Accounting	4
CCT 231	Technology Crimes and Law	3
CCT 240	Data Recovery Techniques	3
CCT 241	Advanced Data Recovery	3
CCT 250	Network Vulnerabilities I	3
CIS 110	Introduction to Computers	3
CIS 115	Intro to Programming and Logic	3
CJC 111	Introduction to Criminal Justice	3
CJC 112	Criminology	3
CJC 113	Juvenile Justice	3
CJC 121	Law Enforcement Operations	3
CJC 131	Criminal Law	3
CJC 132	Court Procedure and Evidence	3

CJC	141	Corrections	3	NET	226	Routing and Switching II	3
CJC	160	Terrorism: Underlying Issues	3	NET	289	Networking Project	3
CJC	212	Ethics and Community Relations	3	NOS	110	Operating Systems Concepts	3
CJC	214	Victimology	3	NOS	120	Linux/UNIX Single User	3
CJC	221	Investigative Principles	4	NOS	130	Windows Single User	3
CJC	223	Organized Crime	3	NOS	220	Linux/Unix Administration I	3
CJC	231	Constitutional Law	3	NOS	230	Windows Administration I	3
CJC	233	Correctional Law	3	NOS	231	Windows Administration II	3
CJC	241	Community-Based Corrections	3	OST	130	Comprehensive Keyboarding	3
CSC	134	C++ Programming	3	OST	136	Word Processing	3
CSC	139	Visual BASIC Programming	3	OST	141	Med Terms I-Med Office	3
CSC	151	JAVA Programming	3	OST	142	Med Terms II-Med Office	3
CSC	153	C# Programming	3	OST	148	Medical Coding Billing and Insurance	3
CSC	234	Advanced C++ Programming	3	OST	149	Medical Legal Issues	3
CSC	239	Advanced Visual BASIC Programming	3	OST	236	Advanced Word Or Information Processing	3
CSC	251	Advanced JAVA Programming	3	OST	243	Med Office Simulation	3
CSC	253	Advanced C# Programming	3	OST	247	Procedure Coding	2
CSC	289	Programming Capstone Project	3	SEC	110	Security Concepts	3
CTS	125	Presentation Graphics	3	SEC	150	Secure Communications	3
CTS	130	Spreadsheet	3	SEC	160	Security Administration I	3
CTS	135	Integrated Software Intro	4	SEC	210	Intrusion Detection	3
CTS	155	Tech Support Functions	3	SGD	111	Introduction to Simulation and Game Development	3
CTS	210	Computer Ethics	3	SGD	112	Simulation and Game Development Design	3
CTS	230	Advanced Spreadsheet	3	SGD	113	Simulation and Game Development Programming	3
CTS	240	Project Management	3	SGD	174	Simulation and Game Level Design	3
CTS	285	Systems Analysis and Design	3	SGD	212	Simulation and Game Development Design II	3
CTS	289	System Support Project	3	SGD	274	Simulation and Game Level Design II	3
DBA	110	Database Concepts	3	SGD	289	Simulation and Game Development Project	3
DBA	115	Database Applications	3	WBL	111	Work-Based Learning I	1
DBA	120	Database Programming I	3	WBL	112	Work-Based Learning I	2
DBA	210	Database Administration	3	WBL	113	Work-Based Learning I	3
DBA	220	Oracle Database Programming II	3	WBL	114	Work-Based Learning I	4
ECM	210	Introduction to E-Commerce	3	WBL	121	Work-Based Learning II	1
HBI	110	Issues and Trends in Healthcare Business Informatics	3	WBL	122	Work-Based Learning II	2
HBI	113	Survey of Medical Insurance	3	WBL	123	Work-Based Learning II	3
HBI	210	Introduction to Health Information Networking	3	WBL	131	Work-Based Learning III	1
HBI	230	Infrastructure and Application Support in Healthcare	3	WBL	132	Work-Based Learning III	2
HBI	250	Data Management and Utilization	3	WBL	211	Work-Based Learning IV	1
HBI	289	Healthcare Business Informatics Project	3	WEB	110	Internet/Web Fundamentals	3
HIT	110	Fundamentals of Health Information Management	3	WEB	111	Introduction to Web Graphics	3
HIT	112	Health Law and Ethics	3	WEB	115	Web Markup and Scripting	3
HIT	114	Health Data Systems and Standards	3	WEB	120	Introduction to Internet Multimedia	3
HMT	110	Introduction to Healthcare Management	3	WEB	125	Mobile Web Design	3
NET	110	Networking Concepts	3	WEB	140	Web Development Tools	3
NET	125	Networking Basics	3	WEB	141	Mobile Interface Design	3
NET	126	Routing Basics	3	WEB	151	Mobile Application Development I	3
NET	175	Wireless Technology	3	WEB	179	JAVA Web Programming	3
NET	225	Routing and Switching I	3	WEB	180	Active Server Pages	3

WEB 182	PHP Programming	3
WEB 186	XML Technology	3
WEB 187	Programming for Mobile Devices	3
WEB 210	Web Design	3
WEB 211	Advanced Web Graphics	3
WEB 214	Social Media	3
WEB 215	Advanced Markup and Scripting	3
WEB 220	Advanced Multimedia	3
WEB 225	Content Management Systems	3
WEB 250	Database Driven Websites	3
WEB 251	Mobile Application Development II	3
WEB 285	Emerging Web Technologies	3
WEB 287	Web E-Portfolio	2

**Total semester hour credits to complete degree: 69**

### Healthcare Business Informatics Diploma (D25500HI)

<http://www.rccc.edu/catalog-2015-2016/?p=3744>

#### First Year Fall

CIS 110	Introduction to Computers	3
* CTI 110	Web, Programming, and Database Foundation	3
* CTI 120	Network and Security Foundation	3
HMT 110	Introduction to Healthcare Management	3
OST 141	Med Terms I-Med Office	3

**Total SHC 15**

#### First Year Spring

HBI 110	Issues and Trends in Healthcare Business Informatics	3
HBI 113	Survey of Medical Insurance	3
OST 149	Medical Legal Issues	3

**Total SHC 9**

#### First Year Summer

CTS 115	Information Systems Business Concepts	3
ENG 111	Writing and Inquiry	3
HUM 110	Technology and Society	3

**Total SHC 9**

#### Second Year Spring

NOS 110	Operating Systems Concepts	3
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**Total SHC 3**

**To obtain the A25500 AAS degree in addition to the D25500HI diploma, take the following courses.**

#### First Year Spring

DBA 110	Database Concepts	3
OST 142	Med Terms II-Med Office	3
OST 149	Medical Legal Issues	3

**Total SHC 9**

#### First Year Summer

SEC 110	Security Concepts	3
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**Total SHC 3**

#### Second Year Fall

ENG 114	Professional Research and Reporting	3
* HBI 250	Data Management and Utilization	3
---	Major Elective	3
---	Social/Behavioral Sciences Elective	3

Take one of the following courses.

MAT 110	Mathematical Measurement and Literacy	3
MAT 171	Precalculus Algebra	4

**Total SHC 15**

#### Second Year Spring

CTS 120	Hardware/Software Support	3
HBI 289	Healthcare Business Informatics Project	3
---	Major Elective	3

**Total SHC 9**

#### Major Electives

Take six semester hour credits from the following courses except those that are also listed above.

CCT 110	Introduction to Cyber Crime	3
CCT 112	Ethics and High Technology	3
CCT 121	Computer Crime Investigation	4
CCT 220	Forensic Accounting	4
CCT 231	Technology Crimes and Law	3
CCT 240	Data Recovery Techniques	3
CCT 241	Advanced Data Recovery	3
CCT 250	Network Vulnerabilities I	3
CIS 110	Introduction to Computers	3
CIS 115	Intro to Programming and Logic	3
CJC 111	Introduction to Criminal Justice	3
CJC 112	Criminology	3
CJC 113	Juvenile Justice	3
CJC 121	Law Enforcement Operations	3
CJC 131	Criminal Law	3
CJC 132	Court Procedure and Evidence	3
CJC 141	Corrections	3
CJC 160	Terrorism: Underlying Issues	3
CJC 212	Ethics and Community Relations	3
CJC 214	Victimology	3
CJC 221	Investigative Principles	4
CJC 223	Organized Crime	3
CJC 231	Constitutional Law	3

CJC	233	Correctional Law	3	NOS	230	Windows Administration I	3
CJC	241	Community-Based Corrections	3	NOS	231	Windows Administration II	3
CSC	134	C++ Programming	3	OST	130	Comprehensive Keyboarding	3
CSC	139	Visual BASIC Programming	3	OST	136	Word Processing	3
CSC	151	JAVA Programming	3	OST	141	Med Terms I-Med Office	3
CSC	153	C# Programming	3	OST	142	Med Terms II-Med Office	3
CSC	234	Advanced C++ Programming	3	OST	148	Medical Coding Billing and Insurance	3
CSC	239	Advanced Visual BASIC Programming	3	OST	149	Medical Legal Issues	3
CSC	251	Advanced JAVA Programming	3	OST	236	Advanced Word Or Information Processing	3
CSC	253	Advanced C# Programming	3	OST	243	Med Office Simulation	3
CSC	289	Programming Capstone Project	3	OST	247	Procedure Coding	2
CTS	125	Presentation Graphics	3	SEC	110	Security Concepts	3
CTS	130	Spreadsheet	3	SEC	150	Secure Communications	3
CTS	135	Integrated Software Intro	4	SEC	160	Security Administration I	3
CTS	155	Tech Support Functions	3	SEC	210	Intrusion Detection	3
CTS	210	Computer Ethics	3	SGD	111	Introduction to Simulation and Game Development	3
CTS	230	Advanced Spreadsheet	3	SGD	112	Simulation and Game Development Design	3
CTS	240	Project Management	3	SGD	113	Simulation and Game Development Programming	3
CTS	285	Systems Analysis and Design	3	SGD	174	Simulation and Game Level Design	3
CTS	289	System Support Project	3	SGD	212	Simulation and Game Development Design II	3
DBA	110	Database Concepts	3	SGD	274	Simulation and Game Level Design II	3
DBA	115	Database Applications	3	SGD	289	Simulation and Game Development Project	3
DBA	120	Database Programming I	3	WBL	111	Work-Based Learning I	1
DBA	210	Database Administration	3	WBL	112	Work-Based Learning I	2
DBA	220	Oracle Database Programming II	3	WBL	113	Work-Based Learning I	3
ECM	210	Introduction to E-Commerce	3	WBL	114	Work-Based Learning I	4
HBI	110	Issues and Trends in Healthcare Business Informatics	3	WBL	121	Work-Based Learning II	1
HBI	113	Survey of Medical Insurance	3	WBL	122	Work-Based Learning II	2
HBI	210	Introduction to Health Information Networking	3	WBL	123	Work-Based Learning II	3
HBI	230	Infrastructure and Application Support in Healthcare	3	WBL	131	Work-Based Learning III	1
HBI	250	Data Management and Utilization	3	WBL	132	Work-Based Learning III	2
HBI	289	Healthcare Business Informatics Project	3	WBL	211	Work-Based Learning IV	1
HIT	110	Fundamentals of Health Information Management	3	WEB	110	Internet/Web Fundamentals	3
HIT	112	Health Law and Ethics	3	WEB	111	Introduction to Web Graphics	3
HIT	114	Health Data Systems and Standards	3	WEB	115	Web Markup and Scripting	3
HMT	110	Introduction to Healthcare Management	3	WEB	120	Introduction to Internet Multimedia	3
NET	110	Networking Concepts	3	WEB	125	Mobile Web Design	3
NET	125	Networking Basics	3	WEB	140	Web Development Tools	3
NET	126	Routing Basics	3	WEB	141	Mobile Interface Design	3
NET	175	Wireless Technology	3	WEB	151	Mobile Application Development I	3
NET	225	Routing and Switching I	3	WEB	179	JAVA Web Programming	3
NET	226	Routing and Switching II	3	WEB	180	Active Server Pages	3
NET	289	Networking Project	3	WEB	182	PHP Programming	3
NOS	110	Operating Systems Concepts	3	WEB	186	XML Technology	3
NOS	120	Linux/UNIX Single User	3	WEB	187	Programming for Mobile Devices	3
NOS	130	Windows Single User	3	WEB	210	Web Design	3
NOS	220	Linux/Unix Administration I	3	WEB	211	Advanced Web Graphics	3
				WEB	214	Social Media	3
				WEB	215	Advanced Markup and Scripting	3

WEB 220	Advanced Multimedia	3
WEB 225	Content Management Systems	3
WEB 250	Database Driven Websites	3
WEB 251	Mobile Application Development II	3
WEB 285	Emerging Web Technologies	3
WEB 287	Web E-Portfolio	2

**Total semester hour credits to complete diploma: 69**

### Information Technology Diploma (D25500IT)

<http://www.rccc.edu/catalog-2015-2016/?p=2405>

#### First Year Fall

CIS 110	Introduction to Computers	3
* CTI 110	Web, Programming, and Database Foundation	3
* CTI 120	Network and Security Foundation	3
CTS 115	Information Systems Business Concepts	3
HUM 110	Technology and Society	3

**Total SHC 15**

#### First Year Spring

* CIS 115	Intro to Programming and Logic	3
* CTS 120	Hardware/Software Support	3
NOS 110	Operating Systems Concepts	3

Take two of the following courses.

CTS 135	Integrated Software Intro	4
CTS 155	Tech Support Functions	3
CTS 220	Advanced Hardware/Software Support	3
CTS 240	Project Management	3
CTS 285	Systems Analysis and Design	3
DBA 115	Database Applications	3
NOS 130	Windows Single User	3

**Total SHC 15-16**

Note: CTS 120 will be taught during the 1st 8 weeks, and CTS 220 will be taught during the 2nd 8 weeks. NOTE: If you plan to complete the A25500 degree, select two of these courses to complete the diploma: CTS 135, CTS 220, CTS 240, CTS 285, DBA 115, or NOS 130.

#### First Year Summer

ENG 111	Writing and Inquiry	3
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**Total SHC 3**

#### Second Year Fall

* DBA 110	Database Concepts	3
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**Total SHC 3**

**To obtain the A25500 AAS degree in addition to the D25500IT diploma, take the following courses.**

#### First Year Spring

* CTS 220	Advanced Hardware/Software Support	3
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Take one of the following courses.

MAT 110	Mathematical Measurement and Literacy	3
MAT 171	Precalculus Algebra	4

**Total SHC 6**

Note: CTS 120, which is required for the diploma, will be in the first 8 week minimester; and CTS 220 will be in the second 8 week minimester. CTS 220 may have been taken to complete the diploma.

#### First Year Summer

CTS 135	Integrated Software Intro	4
---	Social/Behavioral Sciences Elective	3

**Total SHC 7**

Note: CTS 135 may have been taken to complete the diploma.

#### Second Year Fall

CTS 240	Project Management	3
CTS 285	Systems Analysis and Design	3
ENG 114	Professional Research and Reporting	3
---	Major Electives	3

**Total SHC 12**

Note: CTS 240 and/or CTS 285 may have been taken to complete the diploma.

#### Second Year Spring

CTS 289	System Support Project	3
* DBA 115	Database Applications	3
NOS 130	Windows Single User	3
NOS 230	Windows Administration I	3
---	Major Electives	3

**Total SHC 15**

Note: DBA 115 and/or NOS 130 may have been taken to complete the diploma.

**Total semester hour credits to complete degree: 70**

## Mobile Web Technologies Diploma (D25500MW)

<http://www.rccc.edu/catalog-2015-2016/?p=4919>

### First Year Fall

CIS	110	Introduction to Computers	3	
*	CTI	110	Web, Programming, and Database Foundation	3
*	CTI	120	Network and Security Foundation	3
CTS	115	Information Systems Business Concepts	3	
WEB	110	Internet/Web Fundamentals	3	

**Total SHC 15**

### First Year Spring

ENG	111	Writing and Inquiry	3
WEB	115	Web Markup and Scripting	3
WEB	125	Mobile Web Design	3
WEB	141	Mobile Interface Design	3

**Total SHC 12**

### First Year Summer

HUM	110	Technology and Society	3
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**Total SHC 3**

### Second Year Fall

WEB	140	Web Development Tools	3
WEB	210	Web Design	3

**Total SHC 6**

**To obtain the A25500 AAS degree in addition to the D25500MW diploma, take the following courses.**

### First Year Spring

WEB	111	Introduction to Web Graphics	3
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**Total SHC 3**

### First Year Summer

ENG	114	Professional Research and Reporting	3
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Take one of the following courses.

MAT	110	Mathematical Measurement and Literacy	3
MAT	171	Precalculus Algebra	4

**Total SHC 6**

### Second Year Fall

WEB	151	Mobile Application Development I	3
WEB	215	Advanced Markup and Scripting	3
---	---	Social/Behavioral Sciences Elective	3
---	---	Major Electives	1

**Total SHC 10**

### Second Year Spring

*	CTS	120	Hardware/Software Support	3
*	CTS	220	Advanced Hardware/Software Support	3
WEB	225	Content Management Systems	3	
WEB	251	Mobile Application Development II	3	
WEB	287	Web E-Portfolio	2	

**Total SHC 14**

Note: CTS 120 will be in the first 8 week minimester, and CTS 220 will be in the second 8 week minimester.

### Major Electives

Take one semester hour credit from the following courses except those that are also listed above.

CCT	110	Introduction to Cyber Crime	3
CCT	112	Ethics and High Technology	3
CCT	121	Computer Crime Investigation	4
CCT	220	Forensic Accounting	4
CCT	231	Technology Crimes and Law	3
CCT	240	Data Recovery Techniques	3
CCT	241	Advanced Data Recovery	3
CCT	250	Network Vulnerabilities I	3
CIS	110	Introduction to Computers	3
CIS	115	Intro to Programming and Logic	3
CJC	111	Introduction to Criminal Justice	3
CJC	112	Criminology	3
CJC	113	Juvenile Justice	3
CJC	121	Law Enforcement Operations	3
CJC	131	Criminal Law	3
CJC	132	Court Procedure and Evidence	3
CJC	141	Corrections	3
CJC	160	Terrorism: Underlying Issues	3
CJC	212	Ethics and Community Relations	3
CJC	214	Victimology	3
CJC	221	Investigative Principles	4
CJC	223	Organized Crime	3
CJC	231	Constitutional Law	3
CJC	233	Correctional Law	3
CJC	241	Community-Based Corrections	3
CSC	134	C++ Programming	3
CSC	139	Visual BASIC Programming	3
CSC	151	JAVA Programming	3
CSC	153	C# Programming	3
CSC	234	Advanced C++ Programming	3
CSC	239	Advanced Visual BASIC Programming	3
CSC	251	Advanced JAVA Programming	3
CSC	253	Advanced C# Programming	3
CSC	289	Programming Capstone Project	3
CTS	125	Presentation Graphics	3
CTS	130	Spreadsheet	3
CTS	135	Integrated Software Intro	4
CTS	155	Tech Support Functions	3
CTS	210	Computer Ethics	3
CTS	230	Advanced Spreadsheet	3
CTS	240	Project Management	3

CTS	285	Systems Analysis and Design	3	SGD	112	Simulation and Game Development Design	3
CTS	289	System Support Project	3	SGD	113	Simulation and Game Development Programming	3
DBA	110	Database Concepts	3	SGD	174	Simulation and Game Level Design	3
DBA	115	Database Applications	3	SGD	212	Simulation and Game Development Design II	3
DBA	120	Database Programming I	3	SGD	274	Simulation and Game Level Design II3	
DBA	210	Database Administration	3	SGD	289	Simulation and Game Development Project	3
DBA	220	Oracle Database Programming II	3	WBL	111	Work-Based Learning I	1
ECM	210	Introduction to E-Commerce	3	WBL	112	Work-Based Learning I	2
HBI	110	Issues and Trends in Healthcare Business Informatics	3	WBL	113	Work-Based Learning I	3
HBI	113	Survey of Medical Insurance	3	WBL	114	Work-Based Learning I	4
HBI	210	Introduction to Health Information Networking	3	WBL	121	Work-Based Learning II	1
HBI	230	Infrastructure and Application Supportin Healthcare	3	WBL	122	Work-Based Learning II	2
HBI	250	Data Management and Utilization	3	WBL	123	Work-Based Learning II	3
HBI	289	Heathcare Business Informatics Project	3	WBL	131	Work-Based Learning III	1
HIT	110	Fundamentals of Health Information Management	3	WBL	132	Work-Based Learning III	2
HIT	112	Health Law and Ethics	3	WBL	211	Work-Based Learning IV	1
HIT	114	Health Data Systems and Standards	3	WEB	110	Internet/Web Fundamentals	3
HMT	110	Introduction to Healthcare Management	3	WEB	111	Introduction to Web Graphics	3
NET	110	Networking Concepts	3	WEB	115	Web Markup and Scripting	3
NET	125	Networking Basics	3	WEB	120	Introduction to Internet Multimedia	3
NET	126	Routing Basics	3	WEB	125	Mobile Web Design	3
NET	175	Wireless Technology	3	WEB	140	Web Development Tools	3
NET	225	Routing and Switching I	3	WEB	141	Mobile Interface Design	3
NET	226	Routing and Switching II	3	WEB	151	Mobile Application Development I	3
NET	289	Networking Project	3	WEB	179	JAVA Web Programming	3
NOS	110	Operating Systems Concepts	3	WEB	180	Active Server Pages	3
NOS	120	Linux/UNIX Single User	3	WEB	182	PHP Programming	3
NOS	130	Windows Single User	3	WEB	186	XML Technology	3
NOS	220	Linux/Unix Administration I	3	WEB	187	Programming for Mobile Devices	3
NOS	230	Windows Administration I	3	WEB	210	Web Design	3
NOS	231	Windows Administration II	3	WEB	211	Advanced Web Graphics	3
OST	130	Comprehensive Keyboarding	3	WEB	214	Social Media	3
OST	136	Word Processing	3	WEB	215	Advanced Markup and Scripting	3
OST	141	Med Terms I-Med Office	3	WEB	220	Advanced Multimedia	3
OST	142	Med Terms II-Med Office	3	WEB	225	Content Management Systems	3
OST	148	Medical Coding Billing and Insurance	3	WEB	250	Database Driven Websites	3
OST	149	Medical Legal Issues	3	WEB	251	Mobile Application Development II	3
OST	236	Advanced Word Or Information Processsing	3	WEB	285	Emerging Web Technologies	3
OST	243	Med Office Simulation	3	WEB	287	Web E-Portfolio	2
OST	247	Procedure Coding	2	<b>Total semester hour credits to complete degree: 69</b>			
SEC	110	Security Concepts	3				
SEC	150	Secure Communications	3				
SEC	160	Security Administration I	3				
SEC	210	Intrusion Detection	3				
SGD	111	Introduction to Simulation and Game Development	3				

## Networking Technology Diploma (D25500NT)

<http://www.rccc.edu/catalog-2015-2016/?p=2411>

### First Year Fall

CIS	110	Introduction to Computers	3
* CTI	120	Network and Security Foundation	3
NET	125	Networking Basics	3
NET	126	Routing Basics	3
* NOS	110	Operating Systems Concepts	3

**Total SHC 15**

Note: NET 125 will be taught during the 1st 8 weeks; NET 126 will be taught during the 2nd 8 weeks.

### First Year Spring

ENG	111	Writing and Inquiry	3
NET	225	Routing and Switching I	3
NET	226	Routing and Switching II	3
* NOS	130	Windows Single User	3
* NOS	230	Windows Administration I	3

**Total SHC 15**

Note: NET 225 and NOS 130 will be taught during the 1st 8 weeks; NET 226 and NOS 230 will be taught during the 2nd 8 weeks.

### First Year Summer

HUM	110	Technology and Society	3
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**Total SHC 3**

### Second Year Fall

* CTI	110	Web, Programming, and Database Foundation	3
* NOS	120	Linux/UNIX Single User	3

**Total SHC 6**

### Second Year Spring

SEC	110	Security Concepts	3
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**Total SHC 3**

**To obtain the A25500 AAS degree in addition to the D25500NT diploma, take the following courses.**

### First Year Summer

ENG	114	Professional Research and Reporting	3
---	---	Major Electives	3

**Total SHC 6**

### Second Year Fall

* CTS	115	Information Systems Business Concepts	3
NOS	231	Windows Administration II	3
---	---	Major Electives	3

**Total SHC 9**

### Second Year Spring

* CTS	120	Hardware/Software Support	3
* CTS	220	Advanced Hardware/Software Support	3
---	---	Social/Behavioral Sciences Elective	3

Take one of the following courses.

MAT	110	Mathematical Measurement and Literacy	3
MAT	171	Precalculus Algebra	4

**Total SHC 12-13**

Note: CTS 120 will be taught during the 1st 8 weeks; CTS 220 will be taught during the 2nd 8 weeks.

### Major Electives

Take six semester hour credits from the following courses except those that are also listed above.

CCT	110	Introduction to Cyber Crime	3
CCT	112	Ethics and High Technology	3
CCT	121	Computer Crime Investigation	4
CCT	220	Forensic Accounting	4
CCT	231	Technology Crimes and Law	3
CCT	240	Data Recovery Techniques	3
CCT	241	Advanced Data Recovery	3
CCT	250	Network Vulnerabilities I	3
CIS	110	Introduction to Computers	3
CIS	115	Intro to Programming and Logic	3
CJC	111	Introduction to Criminal Justice	3
CJC	112	Criminology	3
CJC	113	Juvenile Justice	3
CJC	121	Law Enforcement Operations	3
CJC	131	Criminal Law	3
CJC	132	Court Procedure and Evidence	3
CJC	141	Corrections	3
CJC	160	Terrorism: Underlying Issues	3
CJC	212	Ethics and Community Relations	3
CJC	214	Victimology	3
CJC	221	Investigative Principles	4
CJC	223	Organized Crime	3
CJC	231	Constitutional Law	3
CJC	233	Correctional Law	3
CJC	241	Community-Based Corrections	3
CSC	134	C++ Programming	3
CSC	139	Visual BASIC Programming	3
CSC	151	JAVA Programming	3
CSC	153	C# Programming	3
CSC	234	Advanced C++ Programming	3
CSC	239	Advanced Visual BASIC Programming	3
CSC	251	Advanced JAVA Programming	3
CSC	253	Advanced C# Programming	3
CSC	289	Programming Capstone Project	3
CTS	125	Presentation Graphics	3
CTS	130	Spreadsheet	3

ROWAN-CABARRUS COMMUNITY COLLEGE

CTS	135	Integrated Software Intro	4	SEC	110	Security Concepts	3
CTS	155	Tech Support Functions	3	SEC	150	Secure Communications	3
CTS	210	Computer Ethics	3	SEC	160	Security Administration I	3
CTS	230	Advanced Spreadsheet	3	SEC	210	Intrusion Detection	3
CTS	240	Project Management	3	SGD	111	Introduction to Simulation and Game Development	3
CTS	285	Systems Analysis and Design	3	SGD	112	Simulation and Game Development Design	3
CTS	289	System Support Project	3	SGD	113	Simulation and Game Development Programming	3
DBA	110	Database Concepts	3	SGD	174	Simulation and Game Level Design	3
DBA	115	Database Applications	3	SGD	212	Simulation and Game Development Design II	3
DBA	120	Database Programming I	3	SGD	274	Simulation and Game Level Design II3	3
DBA	210	Database Administration	3	SGD	289	Simulation and Game Development Project	3
DBA	220	Oracle Database Programming II	3	WBL	111	Work-Based Learning I	1
ECM	210	Introduction to E-Commerce	3	WBL	112	Work-Based Learning I	2
HBI	110	Issues and Trends in Healthcare Business Informatics	3	WBL	113	Work-Based Learning I	3
HBI	113	Survey of Medical Insurance	3	WBL	114	Work-Based Learning I	4
HBI	210	Introduction to Health Information Networking	3	WBL	121	Work-Based Learning II	1
HBI	230	Infrastructure and Application Supportin Healthcare	3	WBL	122	Work-Based Learning II	2
HBI	250	Data Management and Utilization	3	WBL	123	Work-Based Learning II	3
HBI	289	Heathcare Business Informatics Project	3	WBL	131	Work-Based Learning III	1
HIT	110	Fundamentals of Health Information Management	3	WBL	132	Work-Based Learning III	2
HIT	112	Health Law and Ethics	3	WBL	211	Work-Based Learning IV	1
HIT	114	Health Data Systems and Standards	3	WEB	110	Internet/Web Fundamentals	3
HMT	110	Introduction to Healthcare Management	3	WEB	111	Introduction to Web Graphics	3
NET	110	Networking Concepts	3	WEB	115	Web Markup and Scripting	3
NET	125	Networking Basics	3	WEB	120	Introduction to Internet Multimedia	3
NET	126	Routing Basics	3	WEB	125	Mobile Web Design	3
NET	175	Wireless Technology	3	WEB	140	Web Development Tools	3
NET	225	Routing and Switching I	3	WEB	141	Mobile Interface Design	3
NET	226	Routing and Switching II	3	WEB	151	Mobile Application Development I	3
NET	289	Networking Project	3	WEB	179	JAVA Web Programming	3
NOS	110	Operating Systems Concepts	3	WEB	180	Active Server Pages	3
NOS	120	Linux/UNIX Single User	3	WEB	182	PHP Programming	3
NOS	130	Windows Single User	3	WEB	186	XML Technology	3
NOS	220	Linux/Unix Administration I	3	WEB	187	Programming for Mobile Devices	3
NOS	230	Windows Administration I	3	WEB	210	Web Design	3
NOS	231	Windows Administration II	3	WEB	211	Advanced Web Graphics	3
OST	130	Comprehensive Keyboarding	3	WEB	214	Social Media	3
OST	136	Word Processing	3	WEB	215	Advanced Markup and Scripting	3
OST	141	Med Terms I-Med Office	3	WEB	220	Advanced Multimedia	3
OST	142	Med Terms II-Med Office	3	WEB	225	Content Management Systems	3
OST	148	Medical Coding Billing and Insurance3	3	WEB	250	Database Driven Websites	3
OST	149	Medical Legal Issues	3	WEB	251	Mobile Application Development II	3
OST	236	Advanced Word Or Information Processsing	3	WEB	285	Emerging Web Technologies	3
OST	243	Med Office Simulation	3	WEB	287	Web E-Portfolio	2
OST	247	Procedure Coding	2	<b>Total semester hour credits to complete degree: 69</b>			

## Web Technologies Diploma (D25500WT)

<http://www.rccc.edu/catalog-2015-2016/?p=2390>

### First Year Fall

CIS	110	Introduction to Computers	3	
*	CTI	110	Web, Programming, and Database Foundation	3
*	CTI	120	Network and Security Foundation	3
CTS	115	Information Systems Business Concepts	3	
WEB	110	Internet/Web Fundamentals	3	
			<b>Total SHC 15</b>	

### First Year Spring

ENG	111	Writing and Inquiry	3
WEB	115	Web Markup and Scripting	3
WEB	125	Mobile Web Design	3
			<b>Total SHC 9</b>

### First Year Summer

HUM	110	Technology and Society	3
			<b>Total SHC 3</b>

### Second Year Fall

WEB	140	Web Development Tools	3
WEB	210	Web Design	3
WEB	215	Advanced Markup and Scripting	3
			<b>Total SHC 9</b>

**To obtain the A25500 AAS degree in addition to the D25500WT diploma, take the following courses.**

### First Year Spring

DBA	110	Database Concepts	3
WEB	111	Introduction to Web Graphics	3
			<b>Total SHC 6</b>

### First Year Summer

ENG	114	Professional Research and Reporting	3
Take one of the following courses.			
MAT	110	Mathematical Measurement and Literacy	3
MAT	171	Precalculus Algebra	4
			<b>Total SHC 6</b>

### Second Year Fall

WEB	250	Database Driven Websites	3
---	---	Social/Behavioral Sciences Elective	3
---	---	Major Electives	1
			<b>Total SHC 7</b>

### Second Year Spring

*	CTS	120	Hardware/Software Support	3
*	CTS	220	Advanced Hardware/Software Support	3
ECM	210	Introduction to E-Commerce	3	
WEB	225	Content Management Systems	3	
WEB	287	Web E-Portfolio	2	

**Total SHC 14**

Note: CTS 120 will be in the first 8 week minimester, and CTS 220 will be in the second 8 week minimester.

### Major Electives

Take one semester hour credit from the following courses except those that are also listed above.

CCT	110	Introduction to Cyber Crime	3
CCT	112	Ethics and High Technology	3
CCT	121	Computer Crime Investigation	4
CCT	220	Forensic Accounting	4
CCT	231	Technology Crimes and Law	3
CCT	240	Data Recovery Techniques	3
CCT	241	Advanced Data Recovery	3
CCT	250	Network Vulnerabilities I	3
CIS	110	Introduction to Computers	3
CIS	115	Intro to Programming and Logic	3
CJC	111	Introduction to Criminal Justice	3
CJC	112	Criminology	3
CJC	113	Juvenile Justice	3
CJC	121	Law Enforcement Operations	3
CJC	131	Criminal Law	3
CJC	132	Court Procedure and Evidence	3
CJC	141	Corrections	3
CJC	160	Terrorism: Underlying Issues	3
CJC	212	Ethics and Community Relations	3
CJC	214	Victimology	3
CJC	221	Investigative Principles	4
CJC	223	Organized Crime	3
CJC	231	Constitutional Law	3
CJC	233	Correctional Law	3
CJC	241	Community-Based Corrections	3
CSC	134	C++ Programming	3
CSC	139	Visual BASIC Programming	3
CSC	151	JAVA Programming	3
CSC	153	C# Programming	3
CSC	234	Advanced C++ Programming	3
CSC	239	Advanced Visual BASIC Programming	3
CSC	251	Advanced JAVA Programming	3
CSC	253	Advanced C# Programming	3
CSC	289	Programming Capstone Project	3
CTS	125	Presentation Graphics	3
CTS	130	Spreadsheet	3
CTS	135	Integrated Software Intro	4
CTS	155	Tech Support Functions	3

CTS	210	Computer Ethics	3	SEC	160	Security Administration I	3
CTS	230	Advanced Spreadsheet	3	SEC	210	Intrusion Detection	3
CTS	240	Project Management	3	SGD	111	Introduction to Simulation and Game Development	3
CTS	285	Systems Analysis and Design	3	SGD	112	Simulation and Game Development Design	3
CTS	289	System Support Project	3	SGD	113	Simulation and Game Development Programming	3
DBA	110	Database Concepts	3	SGD	174	Simulation and Game Level Design	3
DBA	115	Database Applications	3	SGD	212	Simulation and Game Development Design II	3
DBA	120	Database Programming I	3	SGD	274	Simulation and Game Level Design II3	3
DBA	210	Database Administration	3	SGD	289	Simulation and Game Development Project	3
DBA	220	Oracle Database Programming II	3	WBL	111	Work-Based Learning I	1
ECM	210	Introduction to E-Commerce	3	WBL	112	Work-Based Learning I	2
HBI	110	Issues and Trends in Healthcare Business Informatics	3	WBL	113	Work-Based Learning I	3
HBI	113	Survey of Medical Insurance	3	WBL	114	Work-Based Learning I	4
HBI	210	Introduction to Health Information Networking	3	WBL	121	Work-Based Learning II	1
HBI	230	Infrastructure and Application Supportin Healthcare	3	WBL	122	Work-Based Learning II	2
HBI	250	Data Management and Utilization	3	WBL	123	Work-Based Learning II	3
HBI	289	Heathcare Business Informatics Project	3	WBL	131	Work-Based Learning III	1
HIT	110	Fundamentals of Health Information Management	3	WBL	132	Work-Based Learning III	2
HIT	112	Health Law and Ethics	3	WBL	211	Work-Based Learning IV	1
HIT	114	Health Data Systems and Standards	3	WEB	110	Internet/Web Fundamentals	3
HMT	110	Introduction to Healthcare Management	3	WEB	111	Introduction to Web Graphics	3
NET	110	Networking Concepts	3	WEB	115	Web Markup and Scripting	3
NET	125	Networking Basics	3	WEB	120	Introduction to Internet Multimedia	3
NET	126	Routing Basics	3	WEB	125	Mobile Web Design	3
NET	175	Wireless Technology	3	WEB	140	Web Development Tools	3
NET	225	Routing and Switching I	3	WEB	141	Mobile Interface Design	3
NET	226	Routing and Switching II	3	WEB	151	Mobile Application Development I	3
NET	289	Networking Project	3	WEB	179	JAVA Web Programming	3
NOS	110	Operating Systems Concepts	3	WEB	180	Active Server Pages	3
NOS	120	Linux/UNIX Single User	3	WEB	182	PHP Programming	3
NOS	130	Windows Single User	3	WEB	186	XML Technology	3
NOS	220	Linux/Unix Administration I	3	WEB	187	Programming for Mobile Devices	3
NOS	230	Windows Administration I	3	WEB	210	Web Design	3
NOS	231	Windows Administration II	3	WEB	211	Advanced Web Graphics	3
OST	130	Comprehensive Keyboarding	3	WEB	214	Social Media	3
OST	136	Word Processing	3	WEB	215	Advanced Markup and Scripting	3
OST	141	Med Terms I-Med Office	3	WEB	220	Advanced Multimedia	3
OST	142	Med Terms II-Med Office	3	WEB	225	Content Management Systems	3
OST	148	Medical Coding Billing and Insurance	3	WEB	250	Database Driven Websites	3
OST	149	Medical Legal Issues	3	WEB	251	Mobile Application Development II	3
OST	236	Advanced Word Or Information Processsing	3	WEB	285	Emerging Web Technologies	3
OST	243	Med Office Simulation	3	WEB	287	Web E-Portfolio	2
OST	247	Procedure Coding	2				
SEC	110	Security Concepts	3				
SEC	150	Secure Communications	3				

**Total semester hour credits to complete degree: 69**

## (dot) .net Programming Certificate (C25500NP)

<http://www.rccc.edu/catalog-2015-2016/?p=2518>

### Courses

CIS	115	Intro to Programming and Logic	3
CSC	139	Visual BASIC Programming	3
CSC	153	C# Programming	3
CSC	239	Advanced Visual BASIC Programming3	

**Total semester hour credits to complete certificate: 12**

## Advanced (dot) .net Programming Certificate (C25500AP)

<http://www.rccc.edu/catalog-2015-2016/?p=2521>

### Prerequisite

C25500NP (dot).net Programming certificate is a prerequisite for C25500AP.

### Courses

CSC	239	Advanced Visual BASIC Programming3	
CSC	253	Advanced C# Programming	3
DBA	120	Database Programming I	3
WEB	180	Active Server Pages	3

**Total semester hour credits to complete certificate: 12**

## Advanced Digital Forensics Certificate (C25500AF)

<http://www.rccc.edu/catalog-2015-2016/?p=2485>

### Prerequisite

NET 110 Networking Concepts is a prerequisite to C25500AF.

### Courses

CCT	121	Computer Crime Investigation	4
CCT	220	Forensic Accounting	4
CCT	240	Data Recovery Techniques	3
CCT	241	Advanced Data Recovery	3
CCT	250	Network Vulnerabilities I	3

**Total semester hour credits to complete certificate: 17**

## Advanced Operating Systems Certificate (C25500AS)

<http://www.rccc.edu/catalog-2015-2016/?p=2534>

### Courses

NOS	110	Operating Systems Concepts	3
NOS	120	Linux/UNIX Single User	3
NOS	130	Windows Single User	3
NOS	220	Linux/Unix Administration I	3
NOS	230	Windows Administration I	3

**Total semester hour credits to complete certificate: 15**

## Advanced Web Programming Certificate (C25500AW)

<http://www.rccc.edu/catalog-2015-2016/?p=2512>

### Prerequisite

C25500WP Web Programming certificate is a prerequisite for C25500AW.

### Courses

CSC	251	Advanced JAVA Programming	3
DBA	120	Database Programming I	3
WEB	179	JAVA Web Programming	3
WEB	182	PHP Programming	3

**Total semester hour credits to complete certificate: 12**

## C-Based Programming Certificate (C25500CP)

<http://www.rccc.edu/catalog-2015-2016/?p=2509>

### Courses

CIS	115	Intro to Programming and Logic	3
CSC	134	C++ Programming	3
CSC	151	JAVA Programming	3
CSC	234	Advanced C++ Programming	3

**Total semester hour credits to complete certificate: 12**

### Cisco Networking Certificate (C25500CN)

<http://www.rccc.edu/catalog-2015-2016/?p=2531>

#### Courses

CTI	120	Network and Security Foundation	3
NET	125	Networking Basics	3
NET	126	Routing Basics	3
NET	225	Routing and Switching I	3
NET	226	Routing and Switching II	3

**Total semester hour credits to complete certificate: 15**

### Computer Hardware Repair Certificate (C25500CH)

<http://www.rccc.edu/catalog-2015-2016/?p=2524>

#### courses

CIS	110	Introduction to Computers	3
CTI	120	Network and Security Foundation	3
CTS	120	Hardware/Software Support	3
CTS	220	Advanced Hardware/Software Support	3
NOS	110	Operating Systems Concepts	3
SEC	110	Security Concepts	3

**Total semester hour credits to complete certificate: 18**

### Computer Technology Essentials Certificate (C25500CT)

<http://www.rccc.edu/catalog-2015-2016/?p=2488>

#### Courses

CIS	110	Introduction to Computers	3
CTI	110	Web, Programming, and Database Foundation	3
CTI	120	Network and Security Foundation	3
CTS	115	Information Systems Business Concepts	3

**Total semester hour credits to complete certificate: 12**

### Content Management Certificate (C25500CM)

<http://www.rccc.edu/catalog-2015-2016/?p=2449>

#### Courses

CIS	110	Introduction to Computers	3
DBA	110	Database Concepts	3
WEB	110	Internet/Web Fundamentals	3
WEB	225	Content Management Systems	3
WEB	250	Database Driven Websites	3

**Total semester hour credits to complete certificate: 15**

### Cyber Crime Fundamentals Certificate (C25500CF)

<http://www.rccc.edu/catalog-2015-2016/?p=2478>

#### Courses

CCT	110	Introduction to Cyber Crime	3
CJC	221	Investigative Principles	4
CTI	120	Network and Security Foundation	3
CTS	120	Hardware/Software Support	3
SEC	110	Security Concepts	3

**Total semester hour credits to complete certificate: 16**

### Cyber Crime Law Certificate (C25500CL)

<http://www.rccc.edu/catalog-2015-2016/?p=2481>

#### Courses

CCT	121	Computer Crime Investigation	4
CCT	231	Technology Crimes and Law	3
CJC	132	Court Procedure and Evidence	3
CJC	221	Investigative Principles	4

**Total semester hour credits to complete certificate: 14**

## Cyber Security Administration Certificate (C25500SA)

<http://www.rccc.edu/catalog-2015-2016/?p=2475>

### Prerequisites

C25500ST Cyber Security Technician Certificate and CIS-110 Introduction to Computers and NOS-120 Operating Systems Concepts are prerequisites for the C25500SA certificate.

### Courses

CTS	240	Project Management	3
NOS	220	Linux/Unix Administration I	3
SEC	150	Secure Communications	3
SEC	160	Security Administration I	3
SEC	210	Intrusion Detection	3

**Total semester hour credits to complete certificate: 15**

## Cyber Security Fundamentals Certificate (C25500CS)

<http://www.rccc.edu/catalog-2015-2016/?p=2463>

### Courses

CCT	112	Ethics and High Technology	3
CTI	110	Web, Programming, and Database Foundation	3
CTI	120	Network and Security Foundation	3
NET	125	Networking Basics	3
SEC	110	Security Concepts	3

**Total semester hour credits to complete certificate: 15**

## Cyber Security Technician Certificate (C25500ST)

<http://www.rccc.edu/catalog-2015-2016/?p=2472>

### Courses

CTI	120	Network and Security Foundation	3
CTS	120	Hardware/Software Support	3
NET	125	Networking Basics	3
SEC	110	Security Concepts	3
SEC	160	Security Administration I	3

**Total semester hour credits to complete certificate: 15**

## Database Management Certificate (C25500DM)

<http://www.rccc.edu/catalog-2015-2016/?p=2501>

### Courses

CIS	110	Introduction to Computers	3
CTI	110	Web, Programming, and Database Foundation	3
DBA	110	Database Concepts	3
DBA	115	Database Applications	3
DBA	120	Database Programming I	3
WEB	250	Database Driven Websites	3

**Total semester hour credits to complete certificate: 18**

## Database Programming Certificate (C25500DP)

<http://www.rccc.edu/catalog-2015-2016/?p=2503>

### Courses

CIS	115	Intro to Programming and Logic	3
CSC	139	Visual BASIC Programming	3
CSC	239	Advanced Visual BASIC Programming	3
DBA	120	Database Programming I	3

**Total semester hour credits to complete certificate: 12**

## E-Commerce Certificate (C25500EC)

<http://www.rccc.edu/catalog-2015-2016/?p=2454>

### Courses

CIS	110	Introduction to Computers	3
CTI	110	Web, Programming, and Database Foundation	3
DBA	110	Database Concepts	3
ECM	210	Introduction to E-Commerce	3
WEB	250	Database Driven Websites	3

**Total semester hour credits to complete certificate: 15**

## Healthcare Management Essentials Certificate (C25500HM)

<http://www.rccc.edu/catalog-2015-2016/?p=3456>

HMT	110	Introduction to Healthcare Management	3
OST	141	Med Terms I-Med Office	3
OST	142	Med Terms II-Med Office	3
OST	149	Medical Legal Issues	3

**Total semester hour credits to complete certificate: 12**

## Internet Programmer Certificate (C25500IP)

<http://www.rccc.edu/catalog-2015-2016/?p=3507>

CIS	115	Intro to Programming and Logic	3
CSC	151	JAVA Programming	3
WEB	115	Web Markup and Scripting	3
WEB	140	Web Development Tools	3
WEB	179	JAVA Web Programming	3
WEB	215	Advanced Markup and Scripting	3

**Total semester hour credits to complete certificate: 18**

## Internet Technologies Certificate (C25500IN)

<http://www.rccc.edu/catalog-2015-2016/?p=2435>

### Courses

CIS	110	Introduction to Computers	3
CTI	110	Web, Programming, and Database Foundation	3
WEB	110	Internet/Web Fundamentals	3
WEB	115	Web Markup and Scripting	3

**Total semester hour credits to complete certificate: 12**

## IT Support Fundamentals Certificate (C25500IT)

<http://www.rccc.edu/catalog-2015-2016/?p=2495>

### Courses

CIS	110	Introduction to Computers	3
CTI	120	Network and Security Foundation	3
CTS	120	Hardware/Software Support	3
CTS	155	Tech Support Functions	3
CTS	220	Advanced Hardware/Software Support	3

**Total semester hour credits to complete certificate: 15**

## Medical Data Management Certificate (C25500MM)

<http://www.rccc.edu/catalog-2015-2016/?p=3464>

CIS	110	Introduction to Computers	3
CTI	110	Web, Programming, and Database Foundation	3
DBA	110	Database Concepts	3
HBI	110	Issues and Trends in Healthcare Business Informatics	3
HBI	250	Data Management and Utilization	3

**Total semester hour credits to complete certificate: 15**

## Medical Data Security Basics Certificate (C25500MS)

<http://www.rccc.edu/catalog-2015-2016/?p=3467>

CTI	120	Network and Security Foundation	3
HBI	110	Issues and Trends in Healthcare Business Informatics	3
OST	149	Medical Legal Issues	3
SEC	110	Security Concepts	3

**Total semester hour credits to complete certificate: 12**

## Medical Informatics Essentials Certificate (C25500MI)

<http://www.rccc.edu/catalog-2015-2016/?p=3461>

CTI	110	Web, Programming, and Database Foundation	3
CTI	120	Network and Security Foundation	3
HBI	110	Issues and Trends in Healthcare Business Informatics	3
HBI	113	Survey of Medical Insurance	3

**Total semester hour credits to complete certificate: 12**

## Microsoft Windows Certificate (C25500MW)

<http://www.rccc.edu/catalog-2015-2016/?p=2528>

### Courses

CIS	110	Introduction to Computers	3
CTI	120	Network and Security Foundation	3
NOS	110	Operating Systems Concepts	3
NOS	130	Windows Single User	3
NOS	230	Windows Administration I	3
NOS	231	Windows Administration II	3

**Total semester hour credits to complete certificate: 18**

## Mobile Device Programming Certificate (C25500MD)

<http://www.rccc.edu/catalog-2015-2016/?p=2515>

### Courses

CIS	115	Intro to Programming and Logic	3
CSC	151	JAVA Programming	3
CSC	251	Advanced JAVA Programming	3
DBA	120	Database Programming I	3
WEB	182	PHP Programming	3
WEB	187	Programming for Mobile Devices	3

**Total semester hour credits to complete certificate: 18**

## Mobile Web Design Certificate (C25500MN)

<http://www.rccc.edu/catalog-2015-2016/?p=3501>

### Prerequisite Certificates

C25500WD Web Designer Certificate or C25500IN Internet Technologies Certificate is a prerequisite to C25500MN.

WEB	125	Mobile Web Design	3
WEB	141	Mobile Interface Design	3
WEB	151	Mobile Application Development I	3
WEB	210	Web Design	3
WEB	251	Mobile Application Development II	3

**Total semester hour credits to complete certificate: 15**

## Mobile Web Design Fundamentals Certificate (C25500WF)

<http://www.rccc.edu/catalog-2015-2016/?p=4929>

### Courses

WEB	110	Internet/Web Fundamentals	3
WEB	115	Web Markup and Scripting	3
WEB	125	Mobile Web Design	3
WEB	141	Mobile Interface Design	3

**Total semester hour credits to complete certificate: 12**

## Mobile Web Introduction Certificate (C25500WI)

<http://www.rccc.edu/catalog-2015-2016/?p=4933>

### Courses

CIS	110	Introduction to Computers	3
CTI	110	Web, Programming, and Database Foundation	3
WEB	110	Internet/Web Fundamentals	3
WEB	125	Mobile Web Design	3

**Total semester hour credits to complete certificate: 12**

## Operating Systems Manager Certificate (C25500OM)

<http://www.rccc.edu/catalog-2015-2016/?p=2466>

### Courses

CCT	112	Ethics and High Technology	3
NOS	110	Operating Systems Concepts	3
NOS	120	Linux/UNIX Single User	3
NOS	220	Linux/Unix Administration I	3

**Total semester hour credits to complete certificate: 12**

## Oracle Database Programming Certificate (C25500OD)

<http://www.rccc.edu/catalog-2015-2016/?p=3511>

CIS	110	Introduction to Computers	3
DBA	110	Database Concepts	3
DBA	120	Database Programming I	3
DBA	210	Database Administration	3
DBA	220	Oracle Database Programming II	3

**Total semester hour credits to complete certificate: 15**

## Productivity Software Certificate (C25500PS)

<http://www.rccc.edu/catalog-2015-2016/?p=2492>

### Courses

CIS	110	Introduction to Computers	3
CTS	130	Spreadsheet	3
CTS	135	Integrated Software Intro	4
DBA	110	Database Concepts	3
OST	136	Word Processing	3

**Total semester hour credits to complete certificate: 16**

## Security Fundamentals Certificate (C25500SF)

<http://www.rccc.edu/catalog-2015-2016/?p=2469>

### Courses

CTI	120	Network and Security Foundation	3
NET	125	Networking Basics	3
SEC	110	Security Concepts	3
SEC	150	Secure Communications	3

**Total semester hour credits to complete certificate: 12**

## Simulation and Gaming Design Certificate (C25500SD)

<http://www.rccc.edu/catalog-2015-2016/?p=2460>

### Courses

SGD	112	Simulation and Game Development Design	3
SGD	174	Simulation and Game Level Design	3
SGD	212	Simulation and Game Development Design II	3
SGD	274	Simulation and Game Level Design II3	3
SGD	289	Simulation and Game Development Project	3

**Total semester hour credits to complete certificate: 15**

## Simulation and Gaming Design Introduction Certificate (C25500SI)

<http://www.rccc.edu/catalog-2015-2016/?p=3509>

CTI	110	Web, Programming, and Database Foundation	3
SGD	111	Introduction to Simulation and Game Development	3
SGD	112	Simulation and Game Development Design	3
SGD	113	Simulation and Game Development Programming	3

**Total semester hour credits to complete certificate: 12**

## Simulation and Gaming Fundamentals Certificate (C25500SG)

<http://www.rccc.edu/catalog-2015-2016/?p=2457>

### Courses

SGD	111	Introduction to Simulation and Game Development	3
SGD	112	Simulation and Game Development Design	3
SGD	113	Simulation and Game Development Programming	3
SGD	174	Simulation and Game Level Design	3

**Total semester hour credits to complete certificate: 12**

## Spreadsheet Management Certificate (C25500SM)

<http://www.rccc.edu/catalog-2015-2016/?p=2498>

### Courses

CIS	110	Introduction to Computers	3
CTS	130	Spreadsheet	3
CTS	135	Integrated Software Intro	4
CTS	230	Advanced Spreadsheet	3

**Total semester hour credits to complete certificate: 13**

## Web Design Tools Certificate (C25500WT)

<http://www.rccc.edu/catalog-2015-2016/?p=3505>

WEB	111	Introduction to Web Graphics	3
WEB	115	Web Markup and Scripting	3
WEB	120	Introduction to Internet Multimedia	3
WEB	210	Web Design	3

**Total semester hour credits to complete certificate: 12**

## Web Designer Certificate (C25500WD)

<http://www.rccc.edu/catalog-2015-2016/?p=2443>

### Courses

WEB	110	Internet/Web Fundamentals	3
WEB	115	Web Markup and Scripting	3
WEB	140	Web Development Tools	3
WEB	210	Web Design	3

**Total semester hour credits to complete certificate: 12**

## Web Multimedia Certificate (C25500WM)

<http://www.rccc.edu/catalog-2015-2016/?p=2438>

### Courses

WEB	110	Internet/Web Fundamentals	3
WEB	111	Introduction to Web Graphics	3
WEB	120	Introduction to Internet Multimedia	3
WEB	220	Advanced Multimedia	3

**Total semester hour credits to complete certificate: 12**

## Web Programming Certificate (C25500WP)

<http://www.rccc.edu/catalog-2015-2016/?p=2446>

### Courses

CIS	115	Intro to Programming and Logic	3
CSC	151	JAVA Programming	3
CSC	251	Advanced JAVA Programming	3
WEB	179	JAVA Web Programming	3
WEB	182	PHP Programming	3

**Total semester hour credits to complete certificate: 15**

## Computer-Integrated Machining (50210)

<http://www.rccc.edu/catalog-2015-2016/?p=814>

### 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.

**Awards**

- Associate in Applied Science Degree (A50210)
- Diploma (D50210)
- Advanced CNC Operator Certificate (C50210AP)
- Basic CNC Certificate (C50210CN)
- Basic Machining Certificate (C50210BA)
- CAM Certificate (C50210CA)
- CNC Operator Certificate (C50210OP)
- Conventional Machining Certificate (C50210CM)

**Contact Information**

The Computer-Integrated Machining (50210) program is in the RCCC Department of Engineering and Business Technologies. For additional information regarding this program, contact the program chair, Colin Robinson (colin.robinson@rccc.edu).

**Gainful Employment**

For more information about our graduation rates, the median debt of students who have completed this program and other important information, please view this program in the online RCCC catalog (<http://www.rccc.edu/catalog-2015-2016/?p=814>)

The \* symbol denotes a core course that may not be substituted.

**Associate in Applied Science Degree (A50210)**

<http://www.rccc.edu/catalog-2015-2016/?p=581>

**Course Requirements**

The following is a suggested program of study for completing this degree in five semesters. Some students' programs of study may be different, depending on their enrollment status (day, evening, full-time or part-time).

**First Year Fall**

* BPR	111	Print Reading	2
* MAC	111	Machining Technology I	6
MAC	114	Introduction to Metrology	2
MAC	151	Machining Calculations	2
MEC	142	Physical Metallurgy	2

**Total SHC 14**

**First Year Spring**

BPR	121	Blueprint Reading-Mechanical	2
* MAC	112	Machining Technology II	6
* MAC	122	CNC Turning	2
MAC	124	CNC Milling	2
MAC	152	Advanced Machining Calculations	2
MEC	110	Introduction to CAD/CAM	2

**Total SHC 16**

**First Year Summer**

ISC	113	Industrial Specifications	1
MAC	143	Machining Applications III	4
MAC	222	Advanced CNC Turning	2
MAC	224	Advanced CNC Milling	2
MEC	231	Computer-Aided Manufacturing I	3
			<b>Total SHC 12</b>

**Second Year Fall**

ENG	111	Writing and Inquiry	3
MAT	121	Algebra/Trigonometry I	3
MEC	232	Computer-Aided Manufacturing II	3
---	---	Social/Behavioral Sciences Elective	3
---	---	Technical Electives	2
			<b>Total SHC 14</b>

**Second Year Spring**

MAC	233	Appl in CNC Machining	6
MAC	248	Production Procedures	2
---	---	Humanities/Fine Arts Elective	3

Take one of the following courses.

COM	231	Public Speaking	3
ENG	114	Professional Research and Reporting	3
			<b>Total SHC 14</b>

**Technical Electives**

Select 2 semester hour credits from the following courses.

BUS	230	Small Business Management	3
CIS	110	Introduction to Computers	3
DFT	154	Intro to Solid Modeling	3
EGR	125	Appl Software for Tech	2
ISC	112	Industrial Safety	2
ISC	220	Lean Manufacturing	3
MAC	229	CNC Programming	2
MAC	234	Advanced Multi-Axis MacHining	3
MEC	111	Machine Processes I	3
WBL	112	Work-Based Learning I	2
WLD	112	Basic Welding Processes	2

**Total semester hour credits to complete degree: 70**

## Diploma (D50210)

<http://www.rccc.edu/catalog-2015-2016/?p=586>

### Fall Semester

* BPR	111	Print Reading	2
* MAC	111	Machining Technology I	6
MAC	114	Introduction to Metrology	2
MAC	151	Machining Calculations	2
MEC	142	Physical Metallurgy	2

**Total SHC 14**

### Spring Semester

BPR	121	Blueprint Reading-Mechanical	2
* MAC	112	Machining Technology II	6
* MAC	122	CNC Turning	2
MAC	124	CNC Milling	2
MAC	152	Advanced Machining Calculations	2

**Total SHC 14**

### Summer Term

ENG	111	Writing and Inquiry	3
MAC	143	Machining Applications III	4
MEC	110	Introduction to CAD/CAM	2
---	---	Humanities/Fine Arts Elective	3

**Total SHC 12**

**Total semester hour credits to complete diploma: 40**

## Advanced CNC Operator Certificate (C50210AP)

<http://www.rccc.edu/catalog-2015-2016/?p=3633>

C50210OP CNC Operator Certificate is a prerequisite for C50210AP.

MAC	222	Advanced CNC Turning	2
MAC	224	Advanced CNC Milling	2
MAC	234	Advanced Multi-Axis Machining	3
MEC	110	Introduction to CAD/CAM	2
MEC	231	Computer-Aided Manufacturing I	3
MEC	232	Computer-Aided Manufacturing II	3

**Total semester hour credits to complete certificate: 15**

## Basic CNC Certificate (C50210CN)

<http://www.rccc.edu/catalog-2015-2016/?p=592>

### Courses

MAC	114	Introduction to Metrology	2
MAC	122	CNC Turning	2
MAC	124	CNC Milling	2
MEC	110	Introduction to CAD/CAM	2
MEC	111	Machine Processes I	3
MEC	142	Physical Metallurgy	2

**Total semester hour credits to complete certificate: 13**

## Basic Machining Certificate (C50210BA)

<http://www.rccc.edu/catalog-2015-2016/?p=589>

### Courses

BPR	111	Print Reading	2
MAC	111	Machining Technology I	6
MAC	114	Introduction to Metrology	2
MAC	151	Machining Calculations	2

**Total semester hour credits to complete certificate: 12**

## CAM Certificate (C50210CA)

<http://www.rccc.edu/catalog-2015-2016/?p=606>

### Courses

MAC	122	CNC Turning	2
MAC	124	CNC Milling	2
MEC	110	Introduction to CAD/CAM	2
MEC	111	Machine Processes I	3
MEC	231	Computer-Aided Manufacturing I	3
MEC	232	Computer-Aided Manufacturing II	3

Note: MAC 111 Machining Technology I, 6 SHC, may be substituted for MEC 111.

**Total semester hour credits to complete certificate: 15**

## CNC Operator Certificate (C50210OP)

<http://www.rccc.edu/catalog-2015-2016/?p=602>

### Courses

BPR	111	Print Reading	2
MAC	111	Machining Technology I	6
MAC	114	Introduction to Metrology	2
MAC	122	CNC Turning	2
MAC	124	CNC Milling	2

**Total semester hour credits to complete certificate: 14**

## Conventional Machining Certificate (C50210CM)

<http://www.rccc.edu/catalog-2015-2016/?p=596>

C50210BA Basic Machining Certificate is a prerequisite for this certificate.

### Courses

MAC	111	Machining Technology I	6
MAC	112	Machining Technology II	6
MAC	143	Machining Applications III	4

**Total semester hour credits to complete certificate: 16**

## Construction Management Technology (35190)

<http://www.rccc.edu/catalog-2015-2016/?p=819>

### Description

The construction management technology curriculum is designed to prepare students to apply technical knowledge and skills in the construction management field. It prepares students to supervise, manage, and inspect construction sites, buildings, and associated facilities.

Course work includes instruction in sustainable building and design, print reading, building codes, estimating, construction materials and methods, and other topics related to construction occupations. Instruction includes site safety, personnel supervision, labor relations, diversity training, construction documentation, scheduling, resource and cost control, bid strategies, rework prevention, construction insurance and bonding, accident management and investigation, applicable law

and regulations, and communication skills.

Graduates should qualify for entry-level positions in construction and trades professions as well as positions in industry and government.

### Awards

- Associate in Applied Science Degree (A35190)
- Diploma (D35190)
- BIM/CAD Certificate (C35190BC)
- Construction Management Basic Carpentry Certificate (C35190CC)
- Construction Management Basic Certificate (C35190BA)
- Construction Management Intermediate Certificate (C35190IN)
- Construction Management Project Supervision Certificate (C35190PS)

### Additional Information

Please visit the CMT advising page on Blackboard. The username is cmt.student and the password is cmt. Once you login, click on the 'Construction Management Technology Advising Information' link under 'My Organizations.' If you are a new student, please click on the 'new student' button on the left.

### Blackboard

<http://rccc.blackboard.com>

### Contact Information

The Construction Management Technology (35190) program is in the RCCC Department of Engineering and Business Technologies. For additional information regarding this program, contact the program chair, Kao Vang ([kao.vang@rccc.edu](mailto:kao.vang@rccc.edu)).

### Gainful Employment

For more information about our graduation rates, the median debt of students who have completed this program and other important information, please view this program in the online RCCC catalog (<http://www.rccc.edu/catalog-2015-2016/?p=819>)

The \* symbol denotes a core course that may not be substituted.

## Associate in Applied Science Degree (A35190)

<http://www.rccc.edu/catalog-2015-2016/?p=3239>

### Course Requirements

The following is a suggested program of study for completing this degree in 5 semesters. Some students' programs of study may be different, depending on their enrollment status (day, evening, full-time or part-time).

**First Year Fall**

* BPR	130	Print Reading-Construction	3
CIS	110	Introduction to Computers	3
* CMT	210	Construc Management Fundamentals	3
* CMT	212	Total Safety Performance	3
ENG	111	Writing and Inquiry	3
<b>Total SHC</b>			<b>15</b>

**First Year Spring**

CMT	216	Costs and Productivity	3
CMT	218	Human Relations Issues	3
ENG	114	Professional Research and Reporting	3
MAT	121	Algebra/Trigonometry I	3
---	---	Technical Elective	3
<b>Total SHC</b>			<b>15</b>

**First Year Summer**

* CMT	120	Codes and Inspections	3
* SST	140	Green Building and Design Concepts	3
<b>Total SHC</b>			<b>6</b>

**Second Year Fall**

* ACC	120	Principles of Financial Accounting	4
* CMT	214	Planning and Scheduling	3
SPA	120	Spanish for the Workplace	3
---	---	Humanities/Fine Arts Elective	3
---	---	Social/Behavioral Sciences Elective	3
<b>Total SHC</b>			<b>16</b>

**Second Year Spring**

* CST	241	Planning/Estimating I	3
---	---	Technical Elective	11
<b>Total SHC</b>			<b>14</b>

**Technical Electives**

Select 14 SHC of technical electives from the following categories. Students may take one course from each area of concentration or specialize in one specific concentration with no more than 9 SHC from any one prefix except for CIV. Students anticipating transferring to a four-year university must immediately consult with the program chair of construction management technology to choose electives that will better prepare transfer students.

**Accounting**

ACC	115	College Accounting	4
ACC	121	Principles of Managerial Accounting	4
ACC	129	Individual Income Taxes	3
ACC	132	NC Business Taxes	2
ACC	140	Payroll Accounting	2
ACC	149	Intro to Acc Spreadsheets	2
ACC	150	Accounting Software Applications	2
ACC	175	Hotel and Restaurant Accounting	4
ACC	215	Ethics in Accounting	3

ACC	220	Intermediate Accounting I	4
ACC	221	Intermediate Accounting II	4
ACC	225	Cost Accounting	3
ACC	227	Practices in Accounting	3
ACC	240	Gov and Not-For-Profit Acct	3
ACC	250	Advanced Accounting	3
ACC	268	Information Systems and Internal Controls	3
ACC	269	Auditing and Assurance Services	3

**Air Conditioning, Heating and Refrigeration**

AHR	110	Introduction to Refrigeration	5
AHR	111	HVACR Electricity	3
AHR	112	Heating Technology	4
AHR	113	Comfort Cooling	4
AHR	130	HVAC Controls	3

**Business**

BUS	110	Introduction to Business	3
BUS	115	Business Law I	3
BUS	121	Business Math	3
BUS	125	Personal Finance	3
BUS	137	Principles of Management	3
BUS	153	Human Resource Management	3
BUS	217	Employment Law and Regulations	3
BUS	225	Business Finance	3
BUS	230	Small Business Management	3
BUS	240	Business Ethics	3
BUS	253	Leadership and Management Skills	3
BUS	260	Business Communication	3
BUS	280	REAL Small Business	4

**Carpentry**

CAR	110	Introduction to Carpentry	2
CAR	111	Carpentry I	8
CAR	112	Carpentry II	8
CAR	113	Carpentry III	6
CAR	140	Basic Carpentry	4
CAR	150	Concrete Construction	5

**Civil Engineering Technology**

CEG	210	Construction Materials and Methods	3
CIV	230	Construction Estimating	3
CIV	240	Project Management	3
EGR	115	Intro to Technology	3
EGR	250	Statics/Strength of Mater	5
SRV	110	Surveying I	4
WBL	112	Work-Based Learning I	2
WBL	122	Work-Based Learning II	2

**Drafting**

DFT	111	Technical Drafting I	2
DFT	111A	Technical Drafting I Lab	1
DFT	151	CAD I	3
DFT	152	CAD II	3

**Economics**

ECO	151	Survey of Economics	3
ECO	251	Principles of Microeconomics	3
ECO	252	Principles of Macroeconomics	3

**Electrical**

ELC	113	Residential Wiring	4
ELC	117	Motors and Controls	4
ELC	118	National Electrical Code	2
ELC	125	Diagrams and Schematics	2
ELC	138DC	Circuit Analysis	4

**Welding**

WLD	112	Basic Welding Processes	2
WLD	115	SMAW (Stick) Plate	5
WLD	121	GMAW (MIG) FCAW/Plate	4
WLD	131	GTAW (TIG) Plate	4
WLD	141	Symbols and Specifications	3

**Total semester hour credits to complete degree: 66**

**Diploma (D35190)**

<http://www.rccc.edu/catalog-2015-2016/?p=423>

**Courses**

ACC	120	Principles of Financial Accounting	4	
*	BPR	130	Print Reading-Construction	3
CIS	110	Introduction to Computers	3	
CMT	120	Codes and Inspections	3	
CMT	210	Construction Management Fundamentals	3	
CMT	212	Total Safety Performance	3	
CMT	214	Planning and Scheduling	3	
CMT	216	Costs and Productivity	3	
CMT	218	Human Relations Issues	3	
CST	241	Planning/Estimating I	3	
ENG	111	Writing and Inquiry	3	
MAT	121	Algebra/Trigonometry I	3	
SST	140	Green Building and Design Concepts	3	

**Total semester hour credits to complete diploma: 40**

**BIM/CAD Certificate (C35190BC)**

<http://www.rccc.edu/catalog-2015-2016/?p=4745>

**Courses**

ARC	114	Architectural CAD	2
ARC	114A	Architectural CAD Lab	1
ARC	221	Architectural 3-D CAD	3
ARC	225	Architectural Building Information Modeling I	2
ARC	225A	Architectural Building Information Modeling I Lab	1
ARC	226	Architectural Building Information Modeling II	2
ARC	226A	Architectural Building Information Modeling II Lab	1
BPR	130	Print Reading-Construction	3

**Total semester hour credits to complete certificate: 15**

**Construction Management Basic Carpentry Certificate (C35190CC)**

<http://www.rccc.edu/catalog-2015-2016/?p=4750>

**Courses**

BPR	130	Print Reading-Construction	3
CAR	111	Carpentry I	8
CST	241	Planning/Estimating I	3

**Total semester hour credits to complete certificate: 14**

**Construction Management Basic Certificate (C35190BA)**

<http://www.rccc.edu/catalog-2015-2016/?p=426>

**Courses**

BPR	130	Print Reading-Construction	3
CIS	110	Introduction to Computers	3
CMT	210	Construction Management Fundamentals	3
CMT	212	Total Safety Performance	3
SPA	120	Spanish for the Workplace	3

**Total semester hour credits to complete certificate: 15**

## Construction Management Intermediate Certificate (C35190IN)

<http://www.rccc.edu/catalog-2015-2016/?p=429>

C35190BA is a prerequisite for this certificate

### Courses

BPR	130	Print Reading-Construction	3
CMT	214	Planning and Scheduling	3
CMT	216	Costs and Productivity	3
CMT	218	Human Relations Issues	3
CST	241	Planning/Estimating I	3
MAT	121	Algebra/Trigonometry I	3

**Total semester hour credits to complete certificate: 18**

## Construction Management Project Supervision Certificate (C35190PS)

<http://www.rccc.edu/catalog-2015-2016/?p=432>

### Courses

BPR	130	Print Reading-Construction	3
CMT	210	Construction Management Fundamentals	3
CMT	212	Total Safety Performance	3
CMT	214	Planning and Scheduling	3
CMT	216	Costs and Productivity	3
CMT	218	Human Relations Issues	3

**Total semester hour credits to complete certificate: 18**

## Cosmetology (55140)

<http://www.rccc.edu/catalog-2015-2016/?p=1228>

### Description

The cosmetology curriculum is designed to provide competency-based knowledge, scientific and 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 and 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.

### Awards

- Associate in Applied Science Degree (A55140)
- Diploma (D55140)
- Certificate (C55140)

### Additional Information

Admission Requirements for Cosmetology Programs

<http://www.rccc.edu/onestop/192/admission-requirements-for-cosmetology-programs/>

### Contact Information

The Cosmetology (55140) program is in the RCCC Department of Public Services. For additional information regarding this program, contact the program chair, Wanda Pressley-Altman ([wanda.pressley-altman@rccc.edu](mailto:wanda.pressley-altman@rccc.edu)).

### Gainful Employment

For more information about our graduation rates, the median debt of students who have completed this program and other important information, please view this program in the online RCCC catalog (<http://www.rccc.edu/catalog-2015-2016/?p=1228>)

The \* symbol denotes a core course that may not be substituted.

## Associate in Applied Science Degree (A55140)

<http://www.rccc.edu/catalog-2015-2016/?p=235>

### First Year Fall

*	COS	111	Cosmetology Concepts I	4
*	COS	112	Salon I	8
	ENG	111	Writing and Inquiry	3
				<b>Total SHC 15</b>

### First Year Spring

*	COS	113	Cosmetology Concepts II	4
*	COS	114	Salon II	8
	SOC	210	Introduction to Sociology	3
				<b>Total SHC 15</b>

### First Year Summer

*	COS	115	Cosmetology Concepts III	4
*	COS	116	Salon III	4

Take one of the following courses.

	BIO	140	Environmental Biology	3
	MAT	110	Mathematical Measurement and Literacy	3
				<b>Total SHC 11</b>

### Second Year Fall

	BUS	280	REAL Small Business	4
*	COS	117	Cosmetology Concepts IV	2
	COS	118	Salon IV	7
				<b>Total SHC 13</b>

**Second Year Spring**

CIS	110	Introduction to Computers	3
COM	231	Public Speaking	3
COS	223	Contemp Hair Coloring	2
COS	240	Contemporary Design	2
---	---	Humanities/Fine Arts Elective	3
			<b>Total SHC 13</b>

**Total semester hour credits to complete degree: 67**

**Diploma (D55140)**

<http://www.rccc.edu/catalog-2015-2016/?p=238>

**First Year Fall**

* COS	111	Cosmetology Concepts I	4
* COS	112	Salon I	8

Take one of the following courses.

ENG	102	Applied Communications II	3
ENG	111	Writing and Inquiry	3

**Total SHC 15**

**First Year Spring**

* COS	113	Cosmetology Concepts II	4
* COS	114	Salon II	8

Take one of the following courses.

PSY	101	Applied Psychology	3
PSY	118	Interpersonal Psychology	3
SOC	100	Concepts in Sociology	3
SOC	210	Introduction to Sociology	3

**Total SHC 15**

**First Year Summer**

* COS	115	Cosmetology Concepts III	4
* COS	116	Salon III	4

**Total SHC 8**

**Second Year Fall**

* COS	117	Cosmetology Concepts IV	2
COS	118	Salon IV	7

**Total SHC 9**

**Total semester hour credits to complete diploma: 47**

**Certificate (C55140)**

<http://www.rccc.edu/catalog-2015-2016/?p=241>

**First Year Fall**

* COS	111	Cosmetology Concepts I	4
* COS	112	Salon I	8

**Total SHC 12**

**First Year Spring**

* COS	113	Cosmetology Concepts II	4
* COS	114	Salon II	8
			<b>Total SHC 12</b>

**First Year Summer**

* COS	115	Cosmetology Concepts III	4
* COS	116	Salon III	4
* COS	240	Contemporary Design	2
			<b>Total SHC 10</b>

**Total semester hour credits to complete certificate: 34**

**Cosmetology Instructor (55160)**

<http://www.rccc.edu/catalog-2015-2016/?p=1241>

**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.

**Awards**

- Certificate (C55160)

**Additional Information**

Admission Requirements for Cosmetology Programs

<http://www.rccc.edu/onestop/192/admission-requirements-for-cosmetology-programs/>

**Contact Information**

The Cosmetology Instructor (55160) program is in the RCCC Department of Public Services. For additional information regarding this program, contact the program chair, Wanda Pressley-Altman (wanda.pressley-altman@rccc.edu).

## Gainful Employment

For more information about our graduation rates, the median debt of students who have completed this program and other important information, please view this program in the online RCCC catalog (<http://www.rccc.edu/catalog-2015-2016/?p=1241>)

The \* symbol denotes a core course that may not be substituted.

## Certificate (C55160)

<http://www.rccc.edu/catalog-2015-2016/?p=244>

### First Semester

* COS 271	Instructor Concepts I	5
* COS 272	Instructor Practicum I	7
<b>Total SHC</b>		<b>12</b>

### Second Semester

* COS 273	Instructor Concepts II	5
* COS 274	Instructor Practicum II	7
<b>Total SHC</b>		<b>12</b>

**Total semester hour credits to complete certificate: 24**

# Criminal Justice Technology (55180)

<http://www.rccc.edu/catalog-2015-2016/?p=1516>

## 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 office, and loss prevention specialist.

## Awards

- Associate in Applied Science Degree (A55180)
- Diploma (D55180)
- Certificate (C55180)
- Criminal Justice Corrections Certificate (C55180CR)
- Homeland Security Certificate (C55180HS)
- Juvenile Justice Certificate (C55180JJ)

## Additional Information

Criminal Justice employers require criminal background checks and a criminal record may prohibit employment.

### Criminal Justice Student Worksheets

<http://www.rccc.edu/onestop/1084/criminal-justice-student-worksheets/>

## Contact Information

The Criminal Justice Technology (55180) program is in the RCCC Department of Public Services. For additional information regarding this program, contact the program chair, Kimberly Boling ([kimberly.boling@rccc.edu](mailto:kimberly.boling@rccc.edu)).

## Gainful Employment

For more information about our graduation rates, the median debt of students who have completed this program and other important information, please view this program in the online RCCC catalog (<http://www.rccc.edu/catalog-2015-2016/?p=1516>)

The \* symbol denotes a core course that may not be substituted.

## Associate in Applied Science Degree (A55180)

<http://www.rccc.edu/catalog-2015-2016/?p=364>

## Course Requirements

The following is a suggested program of study for completing this degree in four semesters. Some students' programs of study may be different, depending on their enrollment status (day, evening, full-time or part-time).

### First Year Fall

* CJC 111	Introduction to Criminal Justice	3
CJC 121	Law Enforcement Operations	3
* CJC 131	Criminal Law	3
ENG 111	Writing and Inquiry	3
PSY 150	General Psychology	3
<b>Total SHC</b>		<b>15</b>

### First Year Spring

CIS 110	Introduction to Computers	3
* CJC 112	Criminology	3
* CJC 113	Juvenile Justice	3
CJC 160	Terrorism: Underlying Issues	3
SOC 210	Introduction to Sociology	3

Take one of the following courses.

ENG	112	Writing & Research in the Disciplines	3
ENG	113	Literature-Based Research	3
ENG	114	Professional Research and Reporting	3

**Total SHC 18**

**Second Year Fall**

CJC	141	Corrections	3
* CJC	212	Ethics and Community Relations	3
* CJC	231	Constitutional Law	3
---	---	Major Electives	3

Take one of the following courses.

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

**Total SHC 15-16**

**Second Year Spring**

CJC	132	Court Procedure and Evidence	3
CJC	214	Victimology	3
* CJC	221	Investigative Principles	4
COM	140	Introduction to Intercultural Communication	3
---	---	Major Electives	3

**Total SHC 16**

**Major Electives**

Select 6 SHC from the following courses. This may include up to 3 SHC from WBL course/combination of courses.

CJC	161	Introduction to Homeland Security	3
CJC	162	Intelligence Analysis and Security Management	3
CJC	163	Transportation and Border Security	3
CJC	170	Critical Incident Mgmt for Public Safety	3
CJC	223	Organized Crime	3
CJC	233	Correctional Law	3
CJC	241	Community-Based Corrections	3
CJC	261	High-Risk Situations	2
CJC	262	High-Risk Event Planning	2
PED	111	Physical Fitness I	1
PED	112	Physical Fitness II	1
POL	120	American Government	3
PSY	231	Forensic Psychology	3
PSY	281	Abnormal Psychology	3
SOC	213	Sociology of the Family	3
SOC	245	Drugs and Society	3
WBL	110	World of Work	1
WBL	111	Work-Based Learning I	1
WBL	112	Work-Based Learning I	2
WBL	113	Work-Based Learning I	3
WBL	121	Work-Based Learning II	1
WBL	122	Work-Based Learning II	2
WBL	131	Work-Based Learning III	1

**Total semester hour credits to complete degree: 64-65**

**Additional Information**

Criminal Justice employers require criminal background checks and a criminal record may prohibit employment.

**BLET Transfer Credit**

Students successfully completing Basic Law Enforcement Training at a school accredited by the N.C. Criminal Justice Training and Standards Commission will receive BLET Transfer Credit for these courses: CJC 131, CJC 231, CJC 221 (10 Semester Hour Credits). These students must have successfully completed Basic Law Enforcement Training since 1985. RCCC only ensures acceptance of these transfer credits in our Associate in Applied Science - Criminal Justice Technology Degree Program. These transfer credits may or may not be accepted by a four-year institution to which they intend to transfer.

**Diploma (D55180)**

<http://www.rccc.edu/catalog-2015-2016/?p=4708>

**Courses**

CIS	110	Introduction to Computers	3
* CJC	111	Introduction to Criminal Justice	3
* CJC	112	Criminology	3
* CJC	113	Juvenile Justice	3
CJC	121	Law Enforcement Operations	3
CJC	141	Corrections	3
CJC	160	Terrorism: Underlying Issues	3
* CJC	212	Ethics and Community Relations	3
* CJC	231	Constitutional Law	3
COM	140	Introduction to Intercultural Communication	3
ENG	111	Writing and Inquiry	3
MAT	143	Quantitative Literacy	3

**Total semester hour credits to complete certificate: 36**

**Certificate (C55180)**

<http://www.rccc.edu/catalog-2015-2016/?p=384>

**Courses**

CJC	111	Introduction to Criminal Justice	3
CJC	121	Law Enforcement Operations	3
CJC	141	Corrections	3
PSY	150	General Psychology	3
SOC	210	Introduction to Sociology	3

**Total semester hour credits to complete certificate: 15**

**Additional Information**

Criminal Justice employers require criminal background checks and a criminal record may prohibit employment.

**Criminal Justice Corrections Certificate (C55180CR)**

<http://www.rccc.edu/catalog-2015-2016/?p=4712>

**Courses**

CJC	111	Introduction to Criminal Justice	3
CJC	141	Corrections	3
CJC	212	Ethics and Community Relations	3
CJC	233	Correctional Law	3
CJC	241	Community-Based Corrections	3

**Total semester hour credits to complete certificate: 15**

**Homeland Security Certificate (C55180HS)**

<http://www.rccc.edu/catalog-2015-2016/?p=4720>

**Courses**

CJC	111	Introduction to Criminal Justice	3
CJC	161	Introduction to Homeland Security	3
CJC	162	Intelligence Analysis and Security Management	3
CJC	163	Transportation and Border Security	3
CJC	231	Constitutional Law	3
CJC	261	High-Risk Situations	2

**Total semester hour credits to complete certificate: 17**

**Juvenile Justice Certificate (C55180JJ)**

<http://www.rccc.edu/catalog-2015-2016/?p=4723>

**Courses**

CJC	111	Introduction to Criminal Justice	3
CJC	112	Criminology	3
CJC	113	Juvenile Justice	3
CJC	141	Corrections	3
PSY	150	General Psychology	3
SOC	213	Sociology of the Family	3

**Total semester hour credits to complete certificate: 18**

**Dental Assisting (45240)**

<http://www.rccc.edu/catalog-2015-2016/?p=949>

**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 and 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.

**Awards**

- Diploma (D45240)

**Additional Information**

Checklist for Dental Assisting

<https://www.rccc.edu/onestop/158/dental-assisting-admission-checklist-and-mar-review-request-form/>

Point System

<https://www.rccc.edu/onestop/164/dental-assisting-program-point-system-and-ranking/>

**Contact Information**

The Dental Assisting (45240) program is in the RCCC Department of Academic Programs. For additional information regarding this program, contact the program chair, Linda Kamp ([linda.kamp@rccc.edu](mailto:linda.kamp@rccc.edu)).

**Gainful Employment**

For more information about our graduation rates, the median debt of students who have completed this program and other important information, please view this program in the online RCCC catalog (<http://www.rccc.edu/catalog-2015-2016/?p=949>)

The \* symbol denotes a core course that may not be substituted.

## Diploma (D45240)

<http://www.rccc.edu/catalog-2015-2016/?p=952>

### Fall Semester

BIO	106	Intro to Anatomy/Physiology/ Microbiology	3	
*	DEN	100	Basic Orofacial Anatomy	2
*	DEN	101	Preclinical Procedures	7
*	DEN	102	Dental Materials	5
*	DEN	111	Infection/Hazard Control	2

**Total SHC 19**

Note: Instead of taking BIO 106, students may take BIO 168, BIO 169, and BIO 275 (all three courses).

### Spring Semester

*	DEN	103	Dental Sciences	2
*	DEN	104	Dental Health Education	3
*	DEN	105	Practice Management	2
*	DEN	106	Clinical Practice I	5
*	DEN	112	Dental Radiography	3

**Total SHC 15**

### Summer Term

CIS	110	Introduction to Computers	3	
*	DEN	107	Clinical Practice II	5
ENG	102	Applied Communications II	3	
PSY	118	Interpersonal Psychology	3	

**Total SHC 14**

Note: Instead of taking ENG-102, students may take both ENG-111 and COM-231. Instead of taking PSY 118, students may take PSY 150.

**Total semester hour credits to complete diploma: 48**

## Early Childhood Education (55220)

<http://www.rccc.edu/catalog-2015-2016/?p=833>

### 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 and nutritional needs of children; care and guidance of children; and communication skills with families and children. Students will foster the cognitive and language, physical and motor, social and 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.

### Awards

- Associate in Applied Science Degree - General Program (A55220A)
- Diploma (D55220)
- Child Care Specialist Certificate (C55220CS)
- Early Childhood Administrators Advanced Certificate (C55220EA)

### Additional Information

North Carolina Child Care Licensing Regulations require that all volunteers working in the Early Childhood field obtain a federal criminal background check. Because most of our courses require students to enter child care centers and schools, all students enrolled in the Early Childhood and School Age programs are required to obtain a federal criminal background check and submit to the program chair a copy of the qualification letter they receive from the state. A negative report may prevent students from participating in required courses, which means that the student cannot complete the program requirements. An application process will be required prior to students entering into EDU 214 and EDU 284. Students must have at least a 2.5 GPA, C or higher in Early Childhood courses and be in their last two semesters in order to register for EDU 214 and EDU 284. Please contact the program chair of Early Childhood Education if you have any questions.

### See School-Age Education Programs

<https://www.rccc.edu/catalog-2015-2016/835/school-age-education-55440/>

### See Infant/Toddler Care Certificate

<https://www.rccc.edu/catalog-2015-2016/1399/infanttoddler-care-55290/>

### Contact Information

The Early Childhood Education (55220) program is in the RCCC Department of Health and Education Programs. For additional information regarding this program, contact the program chair, Jeannie Morgan-Campola (jeanne.morgancampola@rccc.edu).

### Gainful Employment

For more information about our graduation rates, the median debt of students who have completed this program and other important information, please view this program in the online RCCC catalog (<http://www.rccc.edu/catalog-2015-2016/?p=833>)

### Information

The \* symbol denotes a core course that may not be substituted.

## Associate in Applied Science Degree - General Program (A55220A)

<http://www.rccc.edu/catalog-2015-2016/?p=870>

### Course Requirements

The following is a suggested program of study for completing this degree in five semesters. Some students' programs of study may be different, depending on their enrollment status (day, evening, full-time or part-time).

#### First Year Fall

* EDU	119	Introduction to Early Childhood Education	4
* EDU	144	Child Development I	3
* EDU	151	Creative Activities	3
* EDU	153	Health, Safety and Nutrition	3
* EDU	271	Educational Technology	3
<b>Total SHC</b>			<b>15</b>

#### First Year Spring

* EDU	145	Child Development II	3
* EDU	146	Child Guidance	3
EDU	162	Observation and Assessment in Early Childhood Education	3
ENG	111	Writing and Inquiry	3
---	---	Humanities/Fine Arts Elective	3
<b>Total SHC</b>			<b>15</b>

Note: Students may select any of the Humanities/Fine Arts electives except for ENG courses.

### First Year Summer

COM	231	Public Speaking	3
PSY	150	General Psychology	3
Take one of the following courses.			
ENG	112	Writing and Research in the Disciplines	3
ENG	113	Literature-Based Research	3
ENG	114	Professional Research and Reporting3	
<b>Total SHC</b>			<b>9</b>

### Second Year Fall

EDU	214	Early Childhood Intermediate Practicum	4
* EDU	221	Children With Exceptionalities	3
EDU	251	Exploration Activities	3
* EDU	280	Language and Literacy Experiences	3
---	---	Major Electives	2
<b>Total SHC</b>			<b>15</b>

### Second Year Spring

* EDU	131	Child, Family, and Community	3
* EDU	234	Infants, Toddlers, and Twos	3
EDU	282	Early Childhood Literature	3
* EDU	284	Early Childhood Capstone Practicum4	4
Take one of the following natural sciences/mathematics courses.			
AST	111	Descriptive Astronomy	3
BIO	111	General Biology I	4
BIO	140	Environmental Biology	3
CHM	121	Foundations of Chemistry	3
MAT	110	Mathematical Measurement and Literacy	3
MAT	143	Quantitative Literacy	3
PHY	110	Conceptual Physics	3
<b>Total SHC</b>			<b>16</b>

Note: The requirement for meeting basic mathematical computation skills must be met for the Natural Sciences/Mathematics course. This can be accomplished by receiving an acceptable score on the basic math section of the placement test or successfully completing DMA-010, DMA-020, and DMA-030.

### Major Electives

Take 2 SHC from the following courses.			
EDU	247	Sensory and Physical Disabilities	3
EDU	248	Developmental Delays	3
EDU	254	Music and Movement for Children	2
EDU	259	Curriculum Planning	3
EDU	261	Early Childhood Administration I	3
EDU	262	Early Childhood Administration II	3
SOC	210	Introduction to Sociology	3
SOC	213	Sociology of the Family	3
SPA	120	Spanish for the Workplace	3

**Total semester hour credits to complete degree: 71**

### Criminal Background Check

North Carolina Child Care Licensing Regulations require that all volunteers working in the Early Childhood field obtain a criminal background check. Because most of our courses require students to enter child care centers and schools, all students enrolled in the Early Childhood and School Age programs are required to obtain a criminal background check and submit to the program chair a copy of the clearance letter they receive from the state. A negative report may prevent students from participating in required courses, which means that the student cannot complete the program requirements.

### Practicum Application

An application process will be required prior to students entering into EDU 214 and EDU 284. Students must have at least a 2.5 GPA, C or higher in Early Childhood courses and be in their last two semesters in order to register for EDU 214 and EDU 284. Please contact the program chair of Early Childhood Education if you have any questions.

### Diploma (D55220)

<http://www.rccc.edu/catalog-2015-2016/?p=878>

#### Courses

* EDU	119	Introduction to Early Childhood Education	4
* EDU	131	Child, Family, and Community	3
* EDU	144	Child Development I	3
* EDU	145	Child Development II	3
* EDU	146	Child Guidance	3
* EDU	151	Creative Activities	3
* EDU	153	Health, Safety and Nutrition	3
EDU	162	Observation and Assessment in Early Childhood Education	3
EDU	214	Early Childhood Intermediate Practicum	4
* EDU	221	Children With Exceptionalities	3
EDU	271	Educational Technology	3
ENG	111	Writing and Inquiry	3
PSY	150	General Psychology	3

**Total semester hour credits to complete diploma: 41**

### Criminal Background Check

North Carolina Child Care Licensing Regulations require that all volunteers working in the Early Childhood field obtain a criminal background check. Because most of our courses require students to enter child care centers and schools, all students enrolled in the Early Childhood and School Age programs are required to obtain a criminal background check and submit to the program chair a copy of the clearance letter they receive from the state. A negative report may prevent students from participating in required courses, which means that the student cannot complete the program requirements.

### Practicum Application

An application process will be required prior to students entering into EDU 214. Students must have at least a 2.5 GPA, C or higher in Early Childhood courses and be in their last semester in order to register for EDU 214. Please contact the program chair of Early Childhood Education if you have any questions.

### Child Care Specialist Certificate (C55220CS)

<http://www.rccc.edu/catalog-2015-2016/?p=883>

#### Courses

EDU	119	Introduction to Early Childhood Education	4
EDU	146	Child Guidance	3
EDU	151	Creative Activities	3
Take 6 SHC from the following courses.			
EDU	131	Child, Family, and Community	3
EDU	144	Child Development I	3
EDU	145	Child Development II	3
EDU	153	Health, Safety and Nutrition	3
EDU	162	Observation and Assessment in Early Childhood Education	3
EDU	271	Educational Technology	3

**Total semester hour credits to complete certificate: 16**

### Early Childhood Administrators Advanced Certificate (C55220EA)

<http://www.rccc.edu/catalog-2015-2016/?p=886>

#### Courses

EDU	119	Introduction to Early Childhood Education	4
EDU	144	Child Development I	3
EDU	145	Child Development II	3
EDU	146	Child Guidance	3
EDU	259	Curriculum Planning	3

Note: Students must successfully complete the N. C. Early Childhood Administration Credential (EDU 261, 3 SHC, and EDU 262, 3 SHC) or present an equivalency letter from the N. C. Division of Child Development.

**Total semester hour credits to complete certificate: 16**

# Electrical System Technology (35130)

<http://www.rccc.edu/catalog-2015-2016/?p=3819>

## Description

The electrical system technology 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.

## Awards

- Associate in Applied Science Degree (A35130)
- Diploma (D35130)
- Industrial Motor Control Certificate (C35130MO)
- Wiring and NEC Certificate (C35130NE)

## Contact Information

The Electrical System Technology (35130) program is in the RCCC Department of Engineering and Business Technologies. For additional information regarding this program, contact the program chair, Tony Deyton (tony.deyton@rccc.edu).

## Associate in Applied Science Degree (A35130)

<http://www.rccc.edu/catalog-2015-2016/?p=3677>

## Course Requirements

The following is a suggested program of study for completing this degree in five semesters. Some students' programs of study may be different, depending on their enrollment status (day, evening, full-time or part-time).

### First Year Fall

* ELC	112	DC/AC Electricity	5
* ELC	113	Residential Wiring	4
* ELC	118	National Electrical Code	2
ELC	126	Electrical Computations	3
			<b>Total SHC 14</b>

### First Year Spring

CIS	110	Introduction to Computers	3
* ELC	117	Motors and Controls	4
ELC	125	Diagrams and Schematics	2
ENG	111	Writing and Inquiry	3
---	---	Social/Behavioral Sciences Elective	3
			<b>Total SHC 15</b>

### First Year Summer

* ELC	115	Industrial Wiring	4
* ELC	119	NEC Calculations	2
* ELC	128	Introduction to Programmable Logic Controller	3
			<b>Total SHC 9</b>

### Second Year Fall

* ELC	228	Programmable Logic Controllers Applications	4
ELN	131	Analog Electronics I	4
ENG	114	Professional Research and Reporting	3
MAT	121	Algebra/Trigonometry I	3
---	---	Major Elective	2
			<b>Total SHC 16</b>

### Second Year Spring

ELC	215	Electrical Maintenance	3
ELN	133	Digital Electronics	4
MAT	122	Algebra/Trigonometry II	3
---	---	Humanities/Fine Arts Elective	3
---	---	Major Elective	2
			<b>Total SHC 15</b>

### Major Elective

Select 4 SHC from the following courses. This may include up to 4 SHC from WBL course/combination of courses.

DFT	151	CAD I	3
ELN	150	Computer-Aided Drafting for Electronics	2
ISC	112	Industrial Safety	2
WBL	111	Work-Based Learning I	1
WBL	112	Work-Based Learning I	2
WBL	113	Work-Based Learning I	3
WBL	121	Work-Based Learning II	1
WBL	122	Work-Based Learning II	2
WBL	131	Work-Based Learning III	1

**Total semester hour credits to complete degree: 69**

## Diploma (D35130)

<http://www.rccc.edu/catalog-2015-2016/?p=3753>

CIS	110	Introduction to Computers	3
* ELC	112	DC/AC Electricity	5
* ELC	113	Residential Wiring	4
ELC	115	Industrial Wiring	4
* ELC	117	Motors and Controls	4
ELC	118	National Electrical Code	2
ELC	119	NEC Calculations	2
ELC	125	Diagrams and Schematics	2
ELC	126	Electrical Computations	3
ELC	128	Introduction to Programmable Logic Controller	3

Take one of the following courses

ENG 102	Applied Communications II	3
ENG 111	Writing and Inquiry	3

Take one of the following courses.

PSY 101	Applied Psychology	3
PSY 150	General Psychology	3

**Total semester hour credits to complete diploma: 38**

### Industrial Motor Control Certificate (C35130MO)

<http://www.rccc.edu/catalog-2015-2016/?p=3561>

ELC 112	DC/AC Electricity	5
ELC 117	Motors and Controls	4
ELC 125	Diagrams and Schematics	2
ELC 126	Electrical Computations	3
ELC 128	Introduction to Programmable Logic Controller	3

**Total semester hour credits to complete certificate: 17**

### Wiring and NEC Certificate (C35130NE)

<http://www.rccc.edu/catalog-2015-2016/?p=3630>

C35130MO is a prerequisite for this certificate.

ELC 113	Residential Wiring	4
ELC 115	Industrial Wiring	4
ELC 118	National Electrical Code	2
ELC 119	NEC Calculations	2

**Total semester hour credits to complete certificate: 12**

# Electronics Engineering Technology (40200)

<http://www.rccc.edu/catalog-2015-2016/?p=793>

### Description

The electronics engineering technology curriculum prepares students to apply basic engineering principles and technical skills in electrical maintenance and management or in the design, planning, construction, development, and installation of electrical systems, machines, and power generating equipment. Students are prepared through the study and application of principles from mathematics, natural sciences, and technology and applied processes in electrical engineering.

Coursework includes mathematics, natural sciences, engineering sciences and technology. Instruction covers electrical circuitry, prototype development and testing, systems analysis and testing, systems maintenance, instrument calibration, and report preparation.

Graduates should qualify for employment as technicians, engineering assistants, technical managers, or salespersons in electrical generation/distribution, industrial maintenance, electronic repair, or other fields requiring a broad-based knowledge of electrical and electronic concepts.

### Awards

- Associate in Applied Science Degree (A40200)
- Diploma (D40200)
- Computer-Aided Drafting Certificate (C40200CD)
- Digital Electronics Certificate (C40200DE)
- Electronics Technology Certificate (C40200ET)
- Programmable Logic Control Certificate (C40200PL)
- Soldering Certificate (C40200SO)

### Contact Information

The Electronics Engineering Technology (40200) program is in the RCCC Department of Academic Programs. For additional information regarding this program, contact the program chair, Naresh Arora ([naresh.arora@rccc.edu](mailto:naresh.arora@rccc.edu)).

### Gainful Employment

For more information about our graduation rates, the median debt of students who have completed this program and other important information, please view this program in the online RCCC catalog (<http://www.rccc.edu/catalog-2015-2016/?p=793>)

The \* symbol denotes a core course that may not be substituted.

## Associate in Applied Science Degree (A40200)

<http://www.rccc.edu/catalog-2015-2016/?p=218>

### First Year Fall

CIS	110	Introduction to Computers	3	
EGR	131	Intro to Electronics Technology	2	
*	ELC	138	DC Circuit Analysis	4
*	ELC	139	AC Circuit Analysis	4
ELN	150	Computer-Aided Drafting for Electronics	2	
			<b>Total SHC 15</b>	

### First Year Spring

*	ELN	131	Analog Electronics I	4
*	ELN	133	Digital Electronics	4
ENG	111	Writing and Inquiry	3	
---	---	Humanities/Fine Arts Elective	3	

### Take one of the following courses.

MAT	121	Algebra/Trigonometry I	3
MAT	171	Precalculus Algebra	4

**Total SHC 17-18**

### First Year Summer

*	ELN	132	Analog Electronics II	4
*	ELN	232	Introduction to Microprocessors	4
---	---	Social/Behavioral Sciences Elective	3	

**Total SHC 11**

### Second Year Fall

CSC	134	C++ Programming	3	
ELN	229	Industrial Electronics	4	
*	ELN	234	Communication Systems	4

Take one of the following courses.

PHY	131	Physics-Mechanics	4
PHY	151	College Physics I	4

Take one of the following courses.

MAT	122	Algebra/Trigonometry II	3
MAT	172	Precalculus Trigonometry	4
MAT	271	Calculus I	4

**Total SHC 18-19**

### Second Year Spring

EGR	285	Design Project	2
ELN	135	Electronic Circuits	3
ENG	114	Professional Research and Reporting	3
---	---	Major Elective	3

Take one of the following courses.

PHY	132	Physics-Electricity and Magnetism	4
PHY	152	College Physics II	4

**Total SHC 15**

### Major Electives

Select 3 SHC from the following courses. This may include up to 3 SHC from WBL course/combination of courses.

ALT	120	Renewable Energy Technologies	3
ELC	128	Introduction to Programmable Logic Controller	3
MAT	223	Applied Calculus	3
WBL	111	Work-Based Learning I	1
WBL	112	Work-Based Learning I	2
WBL	113	Work-Based Learning I	3
WBL	121	Work-Based Learning II	1
WBL	122	Work-Based Learning II	2
WBL	131	Work-Based Learning III	1

**Total semester hour credits to complete degree: 76**

### Additional Information

Students wishing to pursue a BS degree in any engineering technology field should select MAT 171 and MAT 172, PHY 151 and PHY 152, HUM 211 for the Humanities/Fine Arts course, and SOC 210 for the Social/Behavioral Sciences course.

## Electronics Engineering Technology Diploma (D40200)

<http://www.rccc.edu/catalog-2015-2016/?p=3760>

EGR	131	Intro to Electronics Technology	2	
*	ELC	138	DC Circuit Analysis	4
*	ELC	139	AC Circuit Analysis	4
*	ELN	131	Analog Electronics I	4
ELN	132	Analog Electronics II	4	
*	ELN	133	Digital Electronics	4
ELN	150	Computer-Aided Drafting for Electronics	2	
ELN	229	Industrial Electronics	4	
*	ELN	232	Introduction to Microprocessors	4
*	ELN	234	Communication Systems	4
ENG	111	Writing and Inquiry	3	

Take one of the following courses.

MAT	121	Algebra/Trigonometry I	3
MAT	171	Precalculus Algebra	4

**Total semester hour credits to complete diploma: 42**

## Computer-Aided Drafting Certificate (C40200CD)

<http://www.rccc.edu/catalog-2015-2016/?p=3536>

CIS	110	Introduction to Computers	3
EGR	131	Intro to Electronics Technology	2
ELC	138	DC Circuit Analysis	4
ELC	139	AC Circuit Analysis	4
ELN	150	Computer-Aided Drafting for Electronics	2

**Total semester hour credits to complete certificate: 15**

### Additional Information

Students wishing to pursue a BS degree in any engineering technology field may (a) substitute MAT 171 for MAT 121 and MAT 172 for MAT 122. (b) Select SOC 210 and HUM 211 for the Social/Behavioral Sciences and Humanities/Fine Arts electives and (c) substitute PHY 151 and 152 for PHY 131 and 132.

## Digital Electronics Certificate (C40200DE)

<http://www.rccc.edu/catalog-2015-2016/?p=3526>

CIS	110	Introduction to Computers	3
EGR	131	Intro to Electronics Technology	2
ELC	138	DC Circuit Analysis	4
ELC	139	AC Circuit Analysis	4
ELN	133	Digital Electronics	4

**Total semester hour credits to complete certificate: 17**

### Additional Information

Students wishing to pursue a BS degree in any engineering technology field may (a) substitute MAT 171 for MAT 121 and MAT 172 for MAT 122. (b) Select SOC 210 and HUM 211 for the Social/Behavioral Sciences and Humanities/Fine Arts electives and (c) substitute PHY 151 and 152 for PHY 131 and 132.

## Electronics Technology Certificate (C40200ET)

<http://www.rccc.edu/catalog-2015-2016/?p=3533>

CIS	110	Introduction to Computers	3
EGR	131	Intro to Electronics Technology	2
ELC	138	DC Circuit Analysis	4
ELC	139	AC Circuit Analysis	4

**Total semester hour credits to complete certificate: 13**

## Programmable Logic Control Certificate (C40200PL)

<http://www.rccc.edu/catalog-2015-2016/?p=3544>

EGR	131	Intro to Electronics Technology	2
ELC	128	Introduction to Programmable Logic Controller	3
ELC	138	DC Circuit Analysis	4
ELC	139	AC Circuit Analysis	4
ELN	229	Industrial Electronics	4

**Total semester hour credits to complete certificate: 17**

## Soldering Certificate (C40200SO)

<http://www.rccc.edu/catalog-2015-2016/?p=3540>

EGR	131	Intro to Electronics Technology	2
ELC	138	DC Circuit Analysis	4
ELC	139	AC Circuit Analysis	4
ELN	131	Analog Electronics I	4
ELN	234	Communication Systems	4

**Total semester hour credits to complete certificate: 18**

# Emergency Management (55460)

<http://www.rccc.edu/catalog-2015-2016/?p=4507>

## Description

The Emergency Management curriculum is designed to provide students with a foundation of technical and professional knowledge needed for emergency services delivery in local and state government agencies. Study involves both management and technical aspects of law enforcement, fire protection, emergency medical services, and emergency planning.

Course work includes classroom and laboratory exercises to introduce the student to various aspects of emergency preparedness, protection, and enforcement. Students will learn technical and administrative skills such as investigative principles, hazardous materials, codes, standards, emergency agency operations, and finance.

Employment opportunities include ambulance services, fire/rescue agencies, law enforcement agencies, fire marshal offices, industrial firms, educational institutions, emergency management offices, and other government agencies. Employed persons should have opportunities for skilled and supervisory-level positions.

## Awards

- Associate in Applied Science Degree (A55460)
- Diploma (D55460)
- Emergency Business Continuity Certificate (C55460BC)
- Emergency Management Certificate (C55460MG)
- Management for Policing Certificate (C55460PC)
- Rescue Certificate (C55460RS)
- Response and Recovery Certificate (C55460RR)
- Volunteer Services and NGO Certificate (C55460VS)

## Additional Information

Student Worksheet

<https://www.rccc.edu/onestop/1840/emergency-management-student-worksheet>

## Contact Information

The Emergency Management (55460) program is in the RCCC Department of Public Services. For additional information regarding this program, contact the program chair, Kimberly Boling (kimberly.boling@rccc.edu).

## Gainful Employment

For more information about our graduation rates, the median debt of students who have completed this program and other important information, please view this program in the online RCCC catalog (<http://www.rccc.edu/catalog-2015-2016/?p=4507>)

The \* symbol denotes a core course that may not be substituted.

## Associate in Applied Science Degree (A55460)

<http://www.rccc.edu/catalog-2015-2016/?p=4512>

### Course Requirements

The following is a suggested program of study for completing this degree in five semesters. Some students' programs of study may be different, depending on their enrollment status (day, evening, full-time or part-time).

#### First Year Fall

CIS	110	Introduction to Computers	3
COM	140	Introduction to Intercultural Communication	3
ENG	111	Writing and Inquiry	3
* EPT	120	Sociology of Disaster	3
* EPT	140	Emergency Management	3

**Total SHC 15**

#### First Year Spring

EMS	150	Emergency Vehicles and EMS Communication	2
* EPT	130	Mitigation and Preparedness	3

Take one of the following courses for the Incident Management requirement.

* CJC	170	Critical Incident Mgmt for Public Safety	3
* EPT	150	Incident Management	3

Take one of the following courses. ENG 114 is recommended.

ENG	112	Writing and Research in the Disciplines	3
ENG	114	Professional Research and Reporting	3

#### Take one of the following courses.

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

**Total SHC 14**

#### First Year Summer

* EPT	220	Terrorism and Emergency Management	3
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Take one of the following courses.

POL	110	Introduction to Political Science	3
POL	120	American Government	3
PSY	150	General Psychology	3

**Total SHC 6**

#### Second Year Fall

EMS	140	Rescue Scene Management	2
* EPT	210	Response and Recovery	3
* EPT	275	Emergency Operations Center Management	3
---	---	Major Elective	3

Take one of the following courses for the Law and Ethics requirement.

* EPT	124	EM Services Law and Ethics	3
* FIP	152	Fire Protection Law	3
<b>Total SHC</b>			<b>14</b>

**Second Year Spring**

EPT	230	Emergency Planning	3
• FIP	228	Local Government Finance	3
GIS	252	Utilities in GIS	3
---	---	Major Electives	6
<b>Total SHC</b>			<b>15</b>

**Major Electives**

Select nine semester hour credits from the following courses. This may include up to 3 SHC from WBL. The courses not taken to satisfy the Incident Management and Law and Ethics requirements may be selected as Major Electives.

CJC	121	Law Enforcement Operations	3
CJC	160	Terrorism: Underlying Issues	3
EHS	215	Incident Management	4
EMS	140A	Rescue Scene Skills Lab	1
EPT	225	Hazard Analysis/Risk Assessment	3
EPT	260	Business Continuity	3
FIP	164	OSHA Standards	3
FIP	176	HazMat: Operations	4
FIP	180	Wildland Fire Behavior	3
FIP	256	Municipal Public Relations	3
GIS	212	GIS/GPS Applications	6
WBL	111	Work-Based Learning I	1
WBL	112	Work-Based Learning I	2
WBL	113	Work-Based Learning I	3

**Total semester hour credits to complete degree: 64**

**Diploma (D55460)**

<http://www.rccc.edu/catalog-2015-2016/?p=4509>

**Course Requirements**

The following is a suggested program of study for completing this degree in three semesters. Some students' programs of study may be different, depending on their enrollment status (day, evening, full-time or part-time).

**First Year Fall**

* EPT	120	Sociology of Disaster	3
* EPT	140	Emergency Management	3
* EPT	210	Response and Recovery	3
* EPT	275	Emergency Operations Center Management	3
<b>Total SHC</b>			<b>12</b>

**First Year Spring**

EMS	150	Emergency Vehicles and EMS Communication	2
* EPT	130	Mitigation and Preparedness	3
EPT	230	Emergency Planning	3
* FIP	228	Local Government Finance	3
GIS	252	Utilities in GIS	3

Take one of the following courses.

MAT	143	Quantitative Literacy	3
MAT	152	Statistical Methods I	4
MAT	171	Precalculus Algebra	4
<b>Total SHC</b>			<b>17</b>

**First Year Summer**

CIS	110	Introduction to Computers	3
COM	140	Introduction to Intercultural Communication	3
ENG	111	Writing and Inquiry	3
* EPT	220	Terrorism and Emergency Management	3
<b>Total SHC</b>			<b>12</b>

**Total semester hour credits to complete diploma: 41**

**Emergency Business Continuity Certificate (C55460BC)**

<http://www.rccc.edu/catalog-2015-2016/?p=4524>

**Courses**

EPT	225	Hazard Analysis/Risk Assessment	3
EPT	230	Emergency Planning	3
EPT	260	Business Continuity	3
FIP	164	OSHA Standards	3
FIP	176	HazMat: Operations	4

**Total semester hour credits to complete certificate: 16**

## Emergency Management Certificate (C55460MG)

<http://www.rccc.edu/catalog-2015-2016/?p=4518>

### Courses

EPT	140	Emergency Management	3
EPT	150	Incident Management	3
EPT	220	Terrorism and Emergency Management	3
EPT	230	Emergency Planning	3
EPT	275	Emergency Operations Center Management	3
FIP	256	Municipal Public Relations	3

**Total semester hour credits to complete certificate: 18**

## Management for Policing Certificate (C55460PC)

<http://www.rccc.edu/catalog-2015-2016/?p=4542>

### Courses

CJC	170	Critical Incident Mgmt for Public Safety	3
EPT	120	Sociology of Disaster	3
EPT	150	Incident Management	3
EPT	210	Response and Recovery	3

**Total semester hour credits to complete certificate: 12**

## Rescue Certificate (C55460RS)

<http://www.rccc.edu/catalog-2015-2016/?p=4522>

### Courses

EMS	140	Rescue Scene Management	2
EMS	150	Emergency Vehicles and EMS Communication	2
EPT	120	Sociology of Disaster	3
EPT	150	Incident Management	3
EPT	225	Hazard Analysis/Risk Assessment	3

**Total semester hour credits to complete certificate: 13**

## Response and Recovery Certificate (C55460RR)

<http://www.rccc.edu/catalog-2015-2016/?p=4520>

### Courses

EPT	120	Sociology of Disaster	3
EPT	140	Emergency Management	3
EPT	150	Incident Management	3
EPT	210	Response and Recovery	3
EPT	275	Emergency Operations Center Management	3

**Total semester hour credits to complete certificate: 15**

## Volunteer Services and NGO Certificate (C55460VS)

<http://www.rccc.edu/catalog-2015-2016/?p=4528>

### Courses

EMS	140	Rescue Scene Management	2
EPT	120	Sociology of Disaster	3
EPT	210	Response and Recovery	3
FIP	256	Municipal Public Relations	3
WBL	111	Work-Based Learning I	1

**Total semester hour credits to complete certificate: 12**

## Esthetics Technology (55230)

<http://www.rccc.edu/catalog-2015-2016/?p=1249>

### Description

The esthetics technology curriculum provides competency-based knowledge, scientific and 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 and 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 and skin care salons, as a platform artist, and in related businesses.

**Awards**

- Esthetics Technology Certificate (C55230)

**Additional Information**

Admission Requirements for Cosmetology Programs

<http://www.rccc.edu/onestop/192/admission-requirements-for-cosmetology-programs/>

**Contact Information**

The Esthetics Technology (55230) program is in the RCCC Department of Health and Education Programs. For additional information regarding this program, contact the program chair, Wanda Pressley-Altman (wanda.pressley-altman@rccc.edu).

**Gainful Employment**

For more information about our graduation rates, the median debt of students who have completed this program and other important information, please view this program in the online RCCC catalog (<http://www.rccc.edu/catalog-2015-2016/?p=1249>)

The \* symbol denotes a core course that may not be substituted.

**Esthetics Technology Certificate (C55230)**

<http://www.rccc.edu/catalog-2015-2016/?p=250>

**First Semester**

* COS	119	Esthetics Concepts I	2	
* COS	120	Esthetics Salon I	6	
		<b>Total SHC</b>	<b>8</b>	

**Second Semester**

* COS	125	Esthetics Concepts II	2	
* COS	126	Esthetics Salon II	6	
		<b>Total SHC</b>	<b>8</b>	

**Total semester hour credits to complete certificate: 16**

**Fire Protection Technology (55240)**

<http://www.rccc.edu/catalog-2015-2016/?p=783>

**Description**

The Fire Protection Technology curriculum is designed to provide students with knowledge and skills in the technical, managerial, and leadership areas necessary for advancement within the fire protection community and related firefighting industries, and to provide currently employed firefighters with knowledge and skills often required for promotional consideration.

Course work includes diverse fire protection subject areas, including fire prevention and safety, public education, building construction, fire ground strategies and tactic, and local government finance and laws, as they apply to emergency services management. Emphasis includes understanding fire characteristics and the structural consequences of fire; risk assessment and management; and relevant research, communications, and leadership methodologies.

Employment opportunities exist with fire departments, governmental agencies, industrial firms, insurance rating organizations, and educational organizations.

**Awards**

- Associate in Applied Science (A55240)
- Associate in Applied Science Fire College Degree (A55240FC)
- Associate in Applied Science Fire Officer’s Academy Degree (A55240FA)
- Associate in Applied Science Standard Degree (A55240A)
- Diploma (D55240)
- Fire Service Leadership & Management Certificate (C55240LM)
- Fire Service Supervision & Human Resource Certificate (C55240SH)
- Firefighter Health & Wellness Certificate (C55240FH)
- Human Relations in Fire & Government Service Certificate (C55240HR)
- Tactical Athlete Fitness Certificate (C55240TA)

**Additional Information**

The fire protection technology program offers three distinct AAS degrees. (1) The AAS in fire protection technology (A55240A) incorporates the standard requirements of the NCCCS for the AAS in fire protection technology and is the recommended degree path for students not expecting to complete a bachelor’s degree and not currently interested in preparing for the fire service promotions. (2) The AAS in fire protection technology – fire college (A55240FC) is designed for students interested in, but not currently working in, a fire service career. This rigorous degree incorporates the academic requirements and fire service certifications required by most career fire departments in North Carolina. (3) The AAS in fire protection technology – fire officer’s academy (A55240FA) is designed for students currently in a fire service career and incorporates a fire service management focus. This degree will aid the student in gaining the skills, knowledge, and abilities required for those seeking promotional opportunities in the fire service.

**Contact Information**

The Fire Protection Technology (55240) program is in the RCCC Department of Public Services. For additional information regarding this program, contact the program chair, Joe Woodall (joe.woodall@rccc.edu).

## Associate in Applied Science (A55240)

<http://www.rccc.edu/catalog-2015-2016/?p=6606>

### Course Requirements

The following is a suggested program of study for completing this degree in five semesters. Some students' programs of study may be different, depending on their enrollment status (day, evening, full-time or part-time).

#### First Year Fall

CIS	110	Introduction to Computers	3
COM	140	Introduction to Intercultural Communication	3
ENG	111	Writing and Inquiry	3
* FIP	120	Introduction to Fire Protection	3
* FIP	152	Fire Protection Law	3
Take one of the following courses.			
MAT	143	Quantitative Literacy	3
MAT	152	Statistical Methods I	4
MAT	171	Precalculus Algebra	4

**Total SHC 18**

#### First Year Spring

* FIP	124	Fire Prevention and Public Education	3
* FIP	132	Building Construction	3
Take one of the following courses.			
ENG	112	Writing and Research in the Disciplines	3
ENG	114	Professional Research and Reporting	3

**Total SHC 9**

#### First Year Summer

HSE	245	Stress Management	3
---	---	Major Electives	3
Take one of the following courses.			
PSY	150	General Psychology	3
SOC	210	Introduction to Sociology	3

**Total SHC 9**

#### Second Year Fall

* FIP	220	Fire Fighting Strategies	3
* FIP	228	Local Government Finance	3
FIP	277	Fire and Social Behavior	3
---	---	Major Electives	6

**Total SHC 15**

#### Second Year Spring

FIP	232	Hydraulics and Water Distribution	3
---	---	Major Electives	12

**Total SHC 15**

## Major Electives

Select a minimum of 21 SHC from the following courses.

EMS	110	EMT	8
FIP	128	Detection and Investigation	3
FIP	136	Inspections and Codes	3
FIP	140	Industrial Fire Protection	3
FIP	146	Fire Protection Systems	4
FIP	164	OSHA Standards	3
FIP	176	HazMat: Operations	4
FIP	180	Wildland Fire Behavior	3
FIP	184	Wildland Fire Safety	3
FIP	221	Advanced Fire Fighting Strategies	3
FIP	224	Fire Instructor I and II	4
FIP	226	Fire Officer I and II	4
FIP	229	Fire Dynamics and Combustion	3
FIP	230	Chemistry of Hazardous Materials I	5
FIP	240	Fire Service Supervision	3
FIP	248	Fire Service Personnel Administration	3
FIP	256	Municipal Public Relations	3
FIP	264	Flame Properties and Materials Rating	3
FIP	276	Managing Fire Services	3
PED	110	Fit and Well for Life	2
PED	111	Physical Fitness I	1
PED	112	Physical Fitness II	1
PED	117	Weight Training I	1
PED	118	Weight Training II	1
PED	119	Circuit Training	1
PED	259	Prevention and Care of Athletic Injuries	2
PHY	151	College Physics I	4
PHY	152	College Physics II	4
POL	110	Introduction to Political Science	3
PSY	115	Stress Management	2
WBL	114	Work-Based Learning I	4
WBL	123	Work-Based Learning II	3

**Total semester hour credits to complete degree: 66**

### Additional Information

Students planning to transfer to UNCC's Fire Safety Engineering Technology program should select FIP-229, FIP-264, PHY-151, and PHY-152 as Major Electives.

## Associate in Applied Science Fire College Degree (A55240FC)

<http://www.rccc.edu/catalog-2015-2016/?p=357>

### Course Requirements

The following is a suggested program of study for completing this degree in five semesters. Some students' programs of study may be different, depending on their enrollment status (day, evening, full-time or part-time).

**First Year Fall**

CIS	110	Introduction to Computers	3
COM	140	Introduction to Intercultural Communication	3
ENG	111	Writing and Inquiry	3
* FIP	120	Introduction to Fire Protection	3
* FIP	152	Fire Protection Law	3

Take one of the following courses.

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

**Total SHC 18**

**First Year Spring**

* FIP	124	Fire Prevention and Public Education	3
* FIP	132	Building Construction	3
FIP	136	Inspections and Codes	3
PED	111	Physical Fitness I	1

Take one of the following courses.

ENG	112	Writing and Research in the Disciplines	3
ENG	114	Professional Research and Reporting	3

**Total SHC 13**

**First Year Summer**

FIP	176	HazMat: Operations	4
FIP	184	Wildland Fire Safety	3
FIP	228	Local Government Finance	3
FIP	277	Fire and Social Behavior	3

**Total SHC 13**

**Second Year Fall**

FIP	146	Fire Protection Systems	4
FIP	232	Hydraulics and Water Distribution	3
HSE	245	Stress Management	3
PED	112	Physical Fitness II	1

Take one of the following courses.

PSY	150	General Psychology	3
SOC	210	Introduction to Sociology	3

**Total SHC 14**

**Second Year Spring**

EMS	110	EMT	8
* FIP	220	Fire Fighting Strategies	3

**Total SHC 11**

**Total semester hour credits to complete degree: 66**

**Additional Information**

The Fire Protection Technology program offers three distinct AAS degrees. (1) The AAS in Fire Protection Technology (A55240A) incorporates the standard requirements of the NCCCS for the AAS in Fire Protection Technology and is the recommended degree path for students not expecting to complete a bachelor's degree

and not currently interested in fire service promotional opportunities. (2) The Fire Protection Technology – Fire College (A55240FC) is designed for students interested in, but not currently in, a fire service career. This rigorous degree incorporates the academic requirements and fire service certifications required by most career fire departments in North Carolina. (3) The Fire Protection Technology – Fire Officer's Academy (A55240FA) is designed for students currently in a fire service career and incorporates a fire service management focus. This degree will aid the student in gaining the skills, knowledge, and abilities required for those wishing to promote in fire service rank.

**Associate in Applied Science Fire Officer's Academy Degree (A55240FA)**

<http://www.rccc.edu/catalog-2015-2016/?p=390>

**Course Requirements**

The following is a suggested program of study for completing this degree in five semesters. Some students' programs of study may be different, depending on their enrollment status (day, evening, full-time or part-time).

**First Year Fall**

CIS	110	Introduction to Computers	3
COM	140	Introduction to Intercultural Communication	3
ENG	111	Writing and Inquiry	3
* FIP	120	Introduction to Fire Protection	3
* FIP	152	Fire Protection Law	3

Take one of the following courses.

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

**Total SHC 18**

**First Year Spring**

* FIP	124	Fire Prevention and Public Education	3
* FIP	132	Building Construction	3

Take one of the following courses.

ENG	112	Writing and Research in the Disciplines	3
ENG	114	Professional Research and Reporting	3

**Total SHC 9**

**First Year Summer**

HSE	245	Stress Management	3
---	---	Major Electives	3

Take one of the following courses.

PSY	150	General Psychology	3
SOC	210	Introduction to Sociology	3

**Total SHC 9**

**Second Year Fall**

* FIP	220	Fire Fighting Strategies	3
* FIP	228	Local Government Finance	3
FIP	240	Fire Service Supervision	3
FIP	256	Municipal Public Relations	3
FIP	277	Fire and Social Behavior	3
<b>Total SHC</b>			<b>15</b>

**Second Year Spring**

FIP	221	Advanced Fire Fighting Strategies	3
FIP	232	Hydraulics and Water Distribution	3
FIP	276	Managing Fire Services	3
---	---	Major Electives	6
<b>Total SHC</b>			<b>15</b>

**Major Electives**

Select a minimum of 9 SHC from the following courses.

EMS	110	EMT	8
FIP	128	Detection and Investigation	3
FIP	136	Inspections and Codes	3
FIP	140	Industrial Fire Protection	3
FIP	146	Fire Protection Systems	4
FIP	164	OSHA Standards	3
FIP	176	HazMat: Operations	4
FIP	180	Wildland Fire Behavior	3
FIP	184	Wildland Fire Safety	3
FIP	224	Fire Instructor I and II	4
FIP	226	Fire Officer I and II	4
FIP	229	Fire Dynamics and Combustion	3
FIP	230	Chemistry of Hazardous Materials I	5
FIP	248	Fire Service Personnel Administration	3
FIP	264	Flame Properties and Materials Rating	3
PED	110	Fit and Well for Life	2
PED	111	Physical Fitness I	1
PED	112	Physical Fitness II	1
PED	117	Weight Training I	1
PED	118	Weight Training II	1
PED	119	Circuit Training	1
PED	259	Prevention and Care of Athletic Injuries	2
PHY	151	College Physics I	4
PHY	152	College Physics II	4
POL	110	Introduction to Political Science	3
PSY	115	Stress Management	2
WBL	114	Work-Based Learning I	4
WBL	123	Work-Based Learning II	3

**Total semester hour credits to complete degree: 66**

**Additional Information**

The Fire Protection Technology program offers three distinct AAS degrees. (1) The AAS in Fire Protection Technology (A55240) incorporates the standard requirements of the NCCCS for the AAS in Fire Protection Technology and is the recommended degree path for students not expecting to complete a bachelor's degree and not currently interested in fire service promotional opportunities. (2) The Fire Protection Technology – Fire College (A55240FC) is designed for students interested in, but not currently in, a fire service career. This rigorous degree incorporates the academic requirements and fire service certifications required by most career fire departments in North Carolina. (3) The Fire Protection Technology – Fire Officer Academy (A55240FA) is designed for students currently in a fire service career and incorporates a fire service management focus. This degree will aid the student in gaining the skills, knowledge, and abilities required for those wishing to promote in fire service rank.

**Associate in Applied Science Standard Degree (A55240A)**

<http://www.rccc.edu/catalog-2015-2016/?p=400>

**Course Requirements**

The following is a suggested program of study for completing this degree in five semesters. Some students' programs of study may be different, depending on their enrollment status (day, evening, full-time or part-time).

**First Year Fall**

CIS	110	Introduction to Computers	3
ENG	111	Writing and Inquiry	3
* FIP	120	Introduction to Fire Protection	3
* FIP	152	Fire Protection Law	3
HSE	245	Stress Management	3

Take one of the following courses.

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

**Total SHC 18**

**First Year Spring**

* FIP	124	Fire Prevention and Public Education	3
* FIP	132	Building Construction	3
FIP	136	Inspections and Codes	3

Take one of the following courses.

ENG	112	Writing and Research in the Disciplines	3
ENG	114	Professional Research and Reporting	3

**Total SHC 12**

**First Year Summer**

COM 140	Introduction to Intercultural Communication	3
FIP 146	Fire Protection Systems	4
FIP 176	HazMat: Operations	4
POL 110	Introduction to Political Science	3
<b>Total SHC 14</b>		

**Second Year Fall**

FIP 224	Fire Instructor I and II	4
* FIP 228	Local Government Finance	3
FIP 277	Fire and Social Behavior	3
Take one of the following courses.		
PSY 150	General Psychology	3
SOC 210	Introduction to Sociology	3
<b>Total SHC 13</b>		

**Second Year Spring**

* FIP 220	Fire Fighting Strategies	3
FIP 221	Advanced Fire Fighting Strategies	3
FIP 232	Hydraulics and Water Distribution	3
FIP 276	Managing Fire Services	3
<b>Total SHC 12</b>		

**Total semester hour credits to complete degree: 66**

**Additional Information**

The Fire Protection Technology program offers three distinct AAS degrees. (1) The AAS in Fire Protection Technology (A55240) incorporates the standard requirements of the NCCCS for the AAS in Fire Protection Technology and is the recommended degree path for students not expecting to complete a bachelor's degree and not currently interested in fire service promotional opportunities. (2) The Fire Protection Technology – Fire College (A55240FC) is designed for students interested in, but not currently in, a fire service career. This rigorous degree incorporates the academic requirements and fire service certifications required by most career fire departments in North Carolina. (3) The Fire Protection Technology – Fire Officer Academy (A55240FA) is designed for students currently in a fire service career and incorporates a fire service management focus. This degree will aid the student in gaining the skills, knowledge, and abilities required for those wishing to promote in fire service rank.

**Transferring to UNCC's Fire Safety Engineering Tech. Program**

Students planning to transfer to UNCC's Fire Safety Engineering Technology Program should select FIP 229, FIP 264, PHY 151, and PHY 152 major electives.

**Diploma (D55240)**

<http://www.rccc.edu/catalog-2015-2016/?p=3929>

**First Fall Semester**

ENG 111	Writing and Inquiry	3
* FIP 120	Introduction to Fire Protection	3
<b>Total SHC 6</b>		

**First Spring Semester**

* FIP 124	Fire Prevention and Public Education	3
Take one of the following courses.		
PSY 150	General Psychology	3
SOC 210	Introduction to Sociology	3
<b>Total SHC 6</b>		

**First Summer Term**

* FIP 132	Building Construction	3
* FIP 220	Fire Fighting Strategies	3
<b>Total SHC 6</b>		

**Second Fall Semester**

* FIP 152	Fire Protection Law	3
FIP 256	Municipal Public Relations	3
FIP 277	Fire and Social Behavior	3
<b>Total SHC 9</b>		

**Second Spring Semester**

* FIP 228	Local Government Finance	3
FIP 248	Fire Service Personnel Administration	3
FIP 276	Managing Fire Services	3
<b>Total SHC 9</b>		

**Second Summer Term**

FIP 240	Fire Service Supervision	3
HSE 245	Stress Management	3
PED 111	Physical Fitness I	1
<b>Total SHC 7</b>		

**Total semester hour credits to complete diploma: 43**

**Fire Service Leadership and Management Certificate (C55240LM)**

<http://www.rccc.edu/catalog-2015-2016/?p=3946>

**Fall Semester**

FIP 132	Building Construction	3
FIP 228	Local Government Finance	3
<b>Total SHC 6</b>		

**Spring Semester**

FIP	248	Fire Service Personnel Administration	3
FIP	276	Managing Fire Services	3
			<b>Total SHC 6</b>

**Summer Semester**

FIP	220	Fire Fighting Strategies	3
			<b>Total SHC 3</b>

**Total semester hour credits to complete certificate: 15**

**Fire Service Supervision and Human Resource Certificate (C55240SH)**

<http://www.rccc.edu/catalog-2015-2016/?p=3943>

**Fall Semester**

FIP	132	Building Construction	3
FIP	228	Local Government Finance	3
			<b>Total SHC 6</b>

**Spring Semester**

FIP	152	Fire Protection Law	3
FIP	240	Fire Service Supervision	3
			<b>Total SHC 6</b>

**Summer Semester**

FIP	220	Fire Fighting Strategies	3
			<b>Total SHC 3</b>

**Total semester hour credits to complete certificate: 15**

**Firefighter Health and Wellness Certificate (C55240FH)**

<http://www.rccc.edu/catalog-2015-2016/?p=3940>

**Fall Semester**

FIP	132	Building Construction	3
FIP	228	Local Government Finance	3
			<b>Total SHC 6</b>

**Spring Semester**

HSE	245	Stress Management	3
PED	111	Physical Fitness I	1
			<b>Total SHC 4</b>

**Summer Semester**

FIP	220	Fire Fighting Strategies	3
PED	112	Physical Fitness II	1
			<b>Total SHC 4</b>

**Total semester hour credits to complete certificate: 14**

**Human Relations in Fire and Government Service Certificate (C55240HR)**

<http://www.rccc.edu/catalog-2015-2016/?p=3952>

**Fall Semester**

FIP	132	Building Construction	3
FIP	228	Local Government Finance	3
			<b>Total SHC 6</b>

**Spring Semester**

FIP	256	Municipal Public Relations	3
FIP	277	Fire and Social Behavior	3
			<b>Total SHC 6</b>

**Summer Semester**

FIP	220	Fire Fighting Strategies	3
			<b>Total SHC 3</b>

**Total semester hour credits to complete certificate: 15**

**Tactical Athlete Fitness Certificate (C55240TA)**

<http://www.rccc.edu/catalog-2015-2016/?p=4826>

**Courses**

HSE	245	Stress Management	3
PED	110	Fit and Well for Life	2
PED	111	Physical Fitness I	1
PED	112	Physical Fitness II	1
PED	117	Weight Training I	1
PED	118	Weight Training II	1
PED	119	Circuit Training	1
PED	259	Prevention and Care of Athletic Injuries	2

**Total semester hour credits to complete certificate: 12**

# Health Information Technology (45360)

<http://www.rccc.edu/catalog-2015-2016/?p=1954>

## 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.

## Awards

- Health Information Technology Cooperative Transfer Program Offered in Cooperation with CPCC (A45360CP)

## Additional Information

The RCCC A45360CP Health Information Technology Cooperative Transfer Program is offered in cooperation with Central Piedmont Community College. General education courses may be taken at RCCC, and the student will then transfer to CPCC and apply to the HIT program, which requires attending an information session. See the CPCC Health Information Technology link below. See the A45360CP listing to see the courses that can be taken at RCCC.

CPCC Health Information Technology

[http://www.cpcc.edu/health\\_sciences/health-information-technology](http://www.cpcc.edu/health_sciences/health-information-technology)

CPCC HIT Course Sequence

<http://www.cpcc.edu/programs/37>

## Contact Information

The Health Information Technology (45360) program is in the RCCC Department of Science, Biotechnology, Mathematics and Information Technologies. For additional information regarding this program, contact the associate dean, Ian Stevens ([ian.stevens@rccc.edu](mailto:ian.stevens@rccc.edu)).

## Gainful Employment

For more information about our graduation rates, the median debt of students who have completed this program and other important information, please view this program in the online RCCC catalog (<http://www.rccc.edu/catalog-2015-2016/?p=1954>)

The \* symbol denotes a core course that may not be substituted.

## Courses Approved to be Taken at RCCC

BIO	168	Anatomy and Physiology I	4
BIO	169	Anatomy and Physiology II	4
CIS	110	Introduction to Computers	3
ENG	111	Writing and Inquiry	3
PSY	150	General Psychology	3

## English Electives

Take one of the following courses.

ENG	112	Writing/Research in the disc	3
ENG	113	Literature-Based Research	3
ENG	114	Prof Research & Reporting	3

## Communications Electives

Take one of the following courses.

COM	110	Introduction to Communication	3
COM	231	Public Speaking	3

## Mathematics Electives

Take one of the following courses.

MAT	110	Math Measurement & Literacy	3
MAT	143	Quantitative Literacy	3

## Humanities Electives

Take one of the following courses

HUM	130	Myth in Human Culture	3
HUM	160	Introduction to Film	3
HUM	211	Humanities I	3
HUM	212	Humanities II	3

## Total semester hour credits to complete RCCC courses for degree: 29

## Cooperative Transfer Program Offered in Cooperation with CPCC

RCCC has a transfer agreement for HIT with Central Piedmont Community College (CPCC). In this cooperative approach, students are able to take general education courses at RCCC, which are listed above. Students will enroll in the A45360CP program at RCCC. Upon completion of these courses with a minimum grade of 'C', students may then transfer to CPCC and apply to the HIT program, which requires attending an information session. All HIT core courses must be taken at CPCC. The Associate in Applied Science Degree - Health Information Technology will be awarded by CPCC. See the links in the program description under Additional Information for more details.

# Industrial Engineering Technology (40240)

<http://www.rccc.edu/catalog-2015-2016/?p=780>

## Description

The industrial engineering technology curriculum prepares students through the study and application of the principles for developing, implementing and improving integrated systems involving people, materials, equipment and information as leaders in an industrial or manufacturing setting. Students are prepared to use basic engineering principles and technical skills to develop, implement, and improve industrial and service systems.

Course work includes mathematics, leadership and management skills, manufacturing materials and processes, and computerized production methods and instruction in systems analysis, quality and productivity improvement techniques for process development, cost analysis, facilities planning, organizational behavior, industrial processes, industrial planning procedures, computer applications, and report and presentation preparation.

Graduates should qualify as quality improvement technicians, front-line supervisors, production planners, inventory supervisors, and manufacturing technicians. Graduates should qualify for employment as industrial process technicians, quality assurance and control technicians, and facilities managers. Certification is available through organizations such as ASQC, SME and APICS.

## Awards

- Associate in Applied Science Degree (A40240)
- Diploma (D40240)
- Bioprocess Engineering Technology Certificate (C40240BP)
- Industrial Engineering Technology Certificate (C40240IE)
- Industrial Engineering Technology Maintenance Management Certificate (C40240MM)
- Industrial Engineering Technology Management Certificate (C40240MC)
- Industrial Engineering Technology Production Control Certificate (C40240PC)
- Industrial Engineering Technology Quality Certificate (C40240QL)
- Industrial Engineering Technology Safety Certificate (C40240SA)
- Lean Manufacturing Certificate (C40240LM)

## Additional Information

Certification Information

ASQ Certification

<http://asq.org/cert>

SME

<http://www.sme.org/about-sme/>

APICS

<http://www.apics.org/careers-education-professional-development/certification>

## Contact Information

The Industrial Engineering Technology (40240) program is in the RCCC Department of Engineering and Business Technologies. For additional information regarding this program, contact the program chair, Tony Bean (tony.bean@rccc.edu).

## Gainful Employment

For more information about our graduation rates, the median debt of students who have completed this program and other important information, please view this program in the online RCCC catalog (<http://www.rccc.edu/catalog-2015-2016/?p=780>)

The \* symbol denotes a core course that may not be substituted.

## Associate in Applied Science Degree (A40240)

<http://www.rccc.edu/catalog-2015-2016/?p=481>

## Course Requirements

The following is a suggested program of study for completing this degree in five semesters. Some students' programs of study may be different, depending on their enrollment status (day, evening, full-time or part-time).

### First Year Fall

EGR	125	Appl Software for Tech	2
EGR	150	Intro to Engineering	2
ENG	111	Writing and Inquiry	3
* ISC	112	Industrial Safety	2

Take one of the following courses.

MAT	121	Algebra/Trigonometry I	3
MAT	171	Precalculus Algebra	4

Take one of the following core courses.

* DFT	151	CAD I	3
* DFT	170	Engineering Graphics	3

**Total SHC 15-16**

### First Year Spring

ENG	114	Professional Research and Reporting	3
* ISC	135	Principles of Industrial Management	4
* ISC	136	Productivity Analysis I	3
MAT	152	Statistical Methods I	4
---	---	Humanities/Fine Arts Elective	3

**Total SHC 17**

### First Year Summer

---	---	Technical Electives	3
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Take one of the following courses.

ECO	251	Principles of Microeconomics	3
ECO	252	Principles of Macroeconomics	3

**Total SHC 6**

**Second Year Fall**

CIV	240	Project Management	3
* ISC	132	Manufacturing Quality Control	3
* ISC	243	Production and Operations Management I	3
---	---	Technical Electives	6
<b>Total SHC</b>			<b>15</b>

**Second Year Spring**

ISC	220	Lean Manufacturing	3
ISC	255	Engineering Economy	3
* MEC	145	Manufacturing Materials I	3
---	---	Technical Electives	3
<b>Total SHC</b>			<b>12</b>

**Technical Electives**

Select 12 SHC from one of the following options. This may include up to 4 SHC from WBL course/combination of courses.

BIO	111	General Biology I	4
BTC	181	Basic Laboratory Techniques	4
BTC	281	Bioprocess Techniques	4
CHM	132	Organic and Biochemistry	4
CHM	151	General Chemistry I	4
CMT	210	Construction Management Fundamentals	3
CMT	212	Total Safety Performance	3
CMT	216	Costs and Productivity	3
EGR	251	Statics	3
ISC	115	Construction Safety	2
ISC	121	Environmental Health and Safety	3
ISC	214	Job Analysis/Wages and Salary	3
ISC	225	Facility Layout	4
ISC	237	Quality Management	3
MEC	111	Machine Processes I	3
OMT	240	Customers and Products	3
OMT	241	Logistics	3
OMT	243	Support Functions	3
PHY	151	College Physics I	4
WBL	111	Work-Based Learning I	1
WBL	112	Work-Based Learning I	2
WBL	113	Work-Based Learning I	3
WBL	121	Work-Based Learning II	1
WBL	122	Work-Based Learning II	2
WBL	131	Work-Based Learning III	1

**Total semester hour credits to complete degree: 65-66**

**Additional Information**

Students planning to transfer to a four-year school should take MAT 171 for the math requirement, and PHY 151 as a technical elective. MAT 122 or MAT 271 may be substituted for a technical elective (may require extra prerequisites).

**Diploma (D40240)**

<http://www.rccc.edu/catalog-2015-2016/?p=3764>

CIV	240	Project Management	3
EGR	150	Intro to Engineering	2
ENG	111	Writing and Inquiry	3
ISC	112	Industrial Safety	2
* ISC	132	Manufacturing Quality Control	3
ISC	135	Principles of Industrial Management	4
ISC	136	Productivity Analysis I	3
ISC	220	Lean Manufacturing	3
ISC	243	Production and Operations Management I	3
ISC	255	Engineering Economy	3
MAT	152	Statistical Methods I	4

Take one of the following courses.

* DFT	151	CAD I	3
* DFT	170	Engineering Graphics	3

Take one of the following courses.

MAT	121	Algebra/Trigonometry I	3
MAT	171	Precalculus Algebra	4

**Total semester hour credits to complete diploma: 39-40**

**Bioprocess Engineering Technology Certificate (C40240BP)**

<http://www.rccc.edu/catalog-2015-2016/?p=501>

**Courses**

BIO	111	General Biology I	4
BTC	181	Basic Laboratory Techniques	4
BTC	281	Bioprocess Techniques	4
ISC	112	Industrial Safety	2
ISC	132	Manufacturing Quality Control	3

**Total semester hour credits to complete certificate: 17**

## Industrial Engineering Technology Certificate (C40240IE)

<http://www.rccc.edu/catalog-2015-2016/?p=514>

### Courses

EGR	125	Appl Software for Tech	2
ISC	112	Industrial Safety	2
ISC	132	Manufacturing Quality Control	3
ISC	136	Productivity Analysis I	3
ISC	220	Lean Manufacturing	3
ISC	225	Facility Layout	4

**Total semester hour credits to complete certificate: 17**

## Industrial Engineering Technology Maintenance Management Certificate (C40240MM)

<http://www.rccc.edu/catalog-2015-2016/?p=497>

### Courses

ISC	112	Industrial Safety	2
ISC	135	Principles of Industrial Management	4
ISC	225	Facility Layout	4
MEC	111	Machine Processes I	3

Take one of the following courses.

DFT	151	CAD I	3
DFT	170	Engineering Graphics	3

The following courses are not required for the certificate, but may be taken to enhance the student's skills.

CIV	240	Project Management	3
ELC	112	DC/AC Electricity	5
MEC	145	Manufacturing Materials I	3

**Total semester hour credits to complete certificate: 16**

## Industrial Engineering Technology Management Certificate (C40240MC)

<http://www.rccc.edu/catalog-2015-2016/?p=511>

### Courses

CIV	240	Project Management	3
EGR	125	Appl Software for Tech	2
ISC	214	Job Analysis/Wages and Salary	3
ISC	243	Production and Operations Management I	3
ISC	255	Engineering Economy	3

Elective – Take one of the following courses.

ISC	135	Principles of Industrial Management	4
ISC	136	Productivity Analysis I	3
ISC	225	Facility Layout	4

**Total semester hour credits to complete certificate: 17**

## Industrial Engineering Technology Production Control Certificate (C40240PC)

<http://www.rccc.edu/catalog-2015-2016/?p=504>

### Courses

CIV	240	Project Management	3
ISC	136	Productivity Analysis I	3
ISC	220	Lean Manufacturing	3
ISC	243	Production and Operations Management I	3
ISC	255	Engineering Economy	3

**Total semester hour credits to complete certificate: 15**

## Industrial Engineering Technology Quality Certificate (C40240QL)

<http://www.rccc.edu/catalog-2015-2016/?p=493>

### Courses

CIV	240	Project Management	3
EGR	125	Appl Software for Tech	2
ISC	132	Manufacturing Quality Control	3
MEC	145	Manufacturing Materials I	3

Take one of the following courses

DFT	151	CAD I	3
DFT	170	Engineering Graphics	3

**Total semester hour credits to complete certificate: 14**

## Industrial Engineering Technology Safety Certificate (C40240SA)

<http://www.rccc.edu/catalog-2015-2016/?p=486>

### Courses

EGR	125	Appl Software for Tech	2
ISC	112	Industrial Safety	2
ISC	121	Environmental Health and Safety	3
ISC	225	Facility Layout	4

Take one of the following groups.

#### Group One

ISC	115	Construction Safety	2
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#### Group Two

CMT	210	Construction Management Fundamentals	3
CMT	212	Total Safety Performance	3

**Total semester hour credits to complete certificate: 13-17**

## Lean Manufacturing Certificate (C40240LM)

<http://www.rccc.edu/catalog-2015-2016/?p=508>

### Courses

EGR	125	Appl Software for Tech	2
ISC	132	Manufacturing Quality Control	3
ISC	136	Productivity Analysis I	3
ISC	220	Lean Manufacturing	3
MEC	145	Manufacturing Materials I	3

Take one of the following courses.

DFT	151	CAD I	3
DFT	170	Engineering Graphics	3

**Total semester hour credits to complete certificate: 17**

## Infant/Toddler Care (55290)

<http://www.rccc.edu/catalog-2015-2016/?p=1399>

### Description

The 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 and toddler growth and development; physical and nutritional needs 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 and 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 and toddler programs.

### Awards

- Infant/Toddler Care Certificate (C55290)

### Additional Information

See Early Childhood Education Programs

<https://www.rccc.edu/catalog-2015-2016/833/early-childhood-education-55220/>

See School-Age Education Programs

<https://www.rccc.edu/catalog-2015-2016/2015/04/16/school-age-education-55440/>

### Contact Information

The Infant/Toddler Care (55290) program is in the RCCC Department of Health and Education Programs. For additional information regarding this program, contact the program chair, Jeannie Morgan-Campola, (jeanne.morgancampola@rccc.edu).

### Gainful Employment

For more information about our graduation rates, the median debt of students who have completed this program and other important information, please view this program in the online RCCC catalog (<http://www.rccc.edu/catalog-2015-2016/?p=1399>)

The \* symbol denotes a core course that may not be substituted.

## Infant/Toddler Care Certificate (C55290)

<http://www.rccc.edu/catalog-2015-2016/?p=98>

### Fall Semester

* EDU 119	Introduction to Early Childhood Education	4
* EDU 144	Child Development I	3
* EDU 153	Health, Safety and Nutrition	3
<b>Total SHC 10</b>		

### Spring Semester

* EDU 131	Child, Family, and Community	3
* EDU 234	Infants, Toddlers, and Twos	3
<b>Total SHC 6</b>		

**Total semester hour credits to complete certificate: 16**

## Manicuring/Nail Technology (55400)

<http://www.rccc.edu/catalog-2015-2016/?p=1257>

### Description

The manicuring/nail technology curriculum provides competency-based knowledge, scientific and 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 and 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.

### Awards

- Manicuring/Nail Technology Certificate (C55400)

### Additional Information

Admission Requirements for Cosmetology Programs

<http://www.rccc.edu/onestop/192/admission-requirements-for-cosmetology-programs/>

### Contact Information

The Manicuring/Nail Technology (55400) program is in the RCCC Department of Health and Education Programs. For additional information regarding this program, contact the program chair, Wanda Pressley-Altman (wanda.pressley-altman@rccc.edu).

## Gainful Employment

For more information about our graduation rates, the median debt of students who have completed this program and other important information, please view this program in the online RCCC catalog (<http://www.rccc.edu/catalog-2015-2016/?p=1257>)

The \* symbol denotes a core course that may not be substituted.

## Manicuring/Nail Technology Certificate (C55400)

<http://www.rccc.edu/catalog-2015-2016/?p=256>

### First 8 Weeks

* COS 121	Manicure/Nail Technology I	6
<b>Total SHC 6</b>		

### Second 8 Weeks

* COS 222	Manicure/Nail Tech. II	6
<b>Total SHC 6</b>		

**Total semester hour credits to complete certificate: 12**

## Mechanical Drafting Technology (50340)

<http://www.rccc.edu/catalog-2015-2016/?p=1480>

### Description

The mechanical drafting technology curriculum prepares students to apply technical skills and advanced computer software and hardware to create working drawings, graphic representations and computer simulations for mechanical and industrial designs.

Course work includes mathematics, natural sciences, engineering sciences and technology and instruction in engineering graphics, specification interpretation, geometric dimensioning and tolerancing, drafting calculations, two dimensional and three dimensional engineering design, solids modeling, engineering animation, computer-aided drafting (CAD), computer-aided design (CADD) and manufacturing materials and processes.

Graduates should qualify to obtain occupations such as technical service providers, engineering technicians, CAD systems managers, industrial and technology managers, research technicians and graphic technicians. Graduates should qualify for employment in mechanical areas such as manufacturing, fabrication, research and development, and service industries.

**Awards**

- Certificate (C50340)

**Contact Information**

The Mechanical Drafting Technology (50340) program is in the RCCC Department of Engineering and Business Technologies. For additional information regarding this program, contact the program chair, Tony Bean (tony.bean@rccc.edu).

**Gainful Employment**

For more information about our graduation rates, the median debt of students who have completed this program and other important information, please view this program in the online RCCC catalog (<http://www.rccc.edu/catalog-2015-2016/?p=1480>)

The \* symbol denotes a core course that may not be substituted.

**Certificate (C50340)**

<http://www.rccc.edu/catalog-2015-2016/?p=1483>

**Courses**

* DFT	111	Technical Drafting I	2	
	DFT	111A	Technical Drafting I Lab	1
* DFT	112	Technical Drafting II	2	
	DFT	112A	Technical Drafting II Lab	1
* DFT	151	CAD I	3	
* DFT	154	Intro to Solid Modeling	3	
* MEC	111	Machine Processes I	3	

**Total semester hour credits to complete certificate: 15**

**Mechanical Engineering Technology (40320)**

<http://www.rccc.edu/catalog-2015-2016/?p=1502>

**Description**

The mechanical engineering technology curriculum prepares students to use basic engineering principles and technical skills to design, develop, test, and troubleshoot projects involving mechanical systems. Students are prepared through the study and application of principles from mathematics, natural sciences, and technology and applied processes in mechanical engineering.

Coursework includes mathematics, natural sciences, engineering sciences and technology. Instruction covers 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. 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. Engineering technicians may obtain professional certification by application to organizations such as ASQC, SME and NICET.

**Awards**

- Associate in Applied Science Degree (A40320)
- Diploma (D40320)

**Contact Information**

The Mechanical Engineering Technology (40320) program is in the RCCC Department of Engineering and Business Technologies. For additional information regarding this program, contact the program chair, Tony Bean (tony.bean@rccc.edu).

**Gainful Employment**

For more information about our graduation rates, the median debt of students who have completed this program and other important information, please view this program in the online RCCC catalog (<http://www.rccc.edu/catalog-2015-2016/?p=1502>)

The \* symbol denotes a core course that may not be substituted.

**Associate in Applied Science Degree (A40320)**

<http://www.rccc.edu/catalog-2015-2016/?p=446>

**Course Requirements**

The following is a suggested program of study for completing this degree in five semesters. Some students' programs of study may be different, depending on their enrollment status (day, evening, full-time or part-time).

**First Year Fall**

DFT	111	Technical Drafting I	2
DFT	111A	Technical Drafting I Lab	1
* DFT	151	CAD I	3
MAC	114	Introduction to Metrology	2
MEC	111	Machine Processes I	3

Take one of the following courses.

MAT	121	Algebra/Trigonometry I	3
MAT	171	Precalculus Algebra	4

**Total SHC 14-15**

**First Year Spring**

DFT	112	Technical Drafting II	2
DFT	112A	Technical Drafting II Lab	1
DFT	121	Introduction to GDandT	2
* DFT	154	Intro to Solid Modeling	3
ENG	111	Writing and Inquiry	3
Take one of the following courses.			
MAT	122	Algebra/Trigonometry II	3
MAT	172	Precalculus Trigonometry	4
			<b>Total SHC 14-15</b>

**First Year Summer**

DDF	211	Design Process I	4
DFT	254	Intermediate Solid Modeling and Rendering	3
Take one of the following courses.			
* PHY	131	Physics-Mechanics	4
* PHY	151	College Physics I	4
			<b>Total SHC 11</b>

**Second Year Fall**

* EGR	251	Statics	3
ENG	114	Professional Research and Reporting	3
MEC	275	Engineering Mechanisms	3
---	---	Social/Behavioral Sciences	3
---	---	Technical Electives	3
			<b>Total SHC 15</b>

**Second Year Spring**

* EGR	252	Strength of Materials	3
* MEC	145	Manufacturing Materials I	3
* MEC	265	Fluid Mechanics	3
---	---	Humanities/Fine Arts Elective	3
---	---	Technical Electives	3
			<b>Total SHC 15</b>

**Technical Electives**

Select a minimum of 6 semester hour credits from the following courses. This may include up to 2 SHC from WBL course/combination of courses. MAT courses are limited to 5-6 SHC for a total of no more than 9 SHC in Other Major Hours.

**BSET/MEET Transfer Option**

CHM	151	General Chemistry I	4
CIS	115	Intro to Programming and Logic	3
CSC	134	C++ Programming	3
CSC	139	Visual BASIC Programming	3
ELC	112	DC/AC Electricity	5
MAT	152	Statistical Methods I	4
MAT	263	Brief Calculus	4
MAT	271	Calculus I	4
PHY	132	Physics-Electricity and Magnetism	4

**Manufacturing Option**

ELC	125	Diagrams and Schematics	2
ELC	128	Introduction to Programmable Logic Controller	3
ISC	112	Industrial Safety	2
ISC	132	Manufacturing Quality Control	3
MAC	122	CNC Turning	2
MAC	124	CNC Milling	2
MEC	110	Introduction to CAD/CAM	2
WLD	110	Cutting Processes	2
WLD	121	GMAW (MIG) FCAW/Plate	4
WLD	131	GTAW (TIG) Plate	4
2 SHC may be selected from the following courses.			
WBL	111	Work-Based Learning I	1
WBL	112	Work-Based Learning I	2
WBL	121	Work-Based Learning II	1

**Total semester hour credits to complete degree: 69-70**

**Diploma (D40320)**

<http://www.rccc.edu/catalog-2015-2016/?p=3793>

DDF	211	Design Process I	4
DFT	111	Technical Drafting I	2
DFT	111A	Technical Drafting I Lab	1
DFT	112	Technical Drafting II	2
DFT	112A	Technical Drafting II Lab	1
DFT	121	Introduction to GDandT	2
* DFT	151	CAD I	3
* DFT	154	Intro to Solid Modeling	3
DFT	254	Intermediate Solid Modeling and Rendering	3
ENG	111	Writing and Inquiry	3
MAC	114	Introduction to Metrology	2
MEC	111	Machine Processes I	3
* MEC	145	Manufacturing Materials I	3
* PHY	131	Physics-Mechanics	4
Take one of the following courses.			
MAT	121	Algebra/Trigonometry I	3
MAT	171	Precalculus Algebra	4

**Total semester hour credits to complete diploma: 39-40**

# Medical Office Administration (25310)

<http://www.rccc.edu/catalog-2015-2016/?p=683>

## Description

This curriculum prepares individuals for employment in medical and other health-care related offices.

Course work will include medical terminology; information systems; office management; medical coding, billing and insurance; legal and ethical issues; and formatting and word processing. Students will learn administrative and support functions and develop skills applicable in medical environments.

Employment opportunities are available in medical and dental offices, hospitals, insurance companies, laboratories, medical supply companies and other health-care related organizations.

## Awards

- Associate in Applied Science Degree (A25310)
- Diploma (D25310)
- Dental Office Essentials Certificate (C25310DS)
- Dental Office Management Certificate (C25310DM)
- Medical Billing Essentials Certificate (C25310BE)
- Medical Document Production Certificate (C25310MD)
- Medical Office Essentials Certificate (C25310ME)
- Procedural and Diagnostic Coding Certificate (C25310MC)

## Additional Information

This program does not certify students to be medical transcriptionists but may provide students with medical transcribing skills to transcribe medical documents.

## Contact Information

The Medical Office Administration (25310) program is in the RCCC Department of Science, Biotechnology, Mathematics and Information Technologies. For additional information regarding this program, contact the program chair, Kathy Knight ([kathy.knight@rccc.edu](mailto:kathy.knight@rccc.edu)).

## Gainful Employment

For more information about our graduation rates, the median debt of students who have completed this program and other important information, please view this program in the online RCCC catalog (<http://www.rccc.edu/catalog-2015-2016/?p=683>)

The \* symbol denotes a core course that may not be substituted.

# Associate in Applied Science Degree (A25310)

<http://www.rccc.edu/catalog-2015-2016/?p=685>

## Course Requirements

The following is a suggested program of study for completing this degree in four semesters. Some students' programs of study may be different, depending on their enrollment status (day, evening, full-time or part-time).

### First Year Fall

* CIS	110	Introduction to Computers	3	
* OST	130	Comprehensive Keyboarding	3	
	OST	136	Word Processing	3
* OST	141	Med Terms I-Med Office	3	
* OST	181	Introduction to Office Systems	3	
			<b>Total SHC 15</b>	

### First Year Spring

* OST	134	Text Entry and Formatting	3	
* OST	142	Med Terms II-Med Office	3	
* OST	148	Medical Coding Billing and Insurance	3	
* OST	149	Medical Legal Issues	3	
	OST	236	Advanced Word Or Information Processing	3
			<b>Total SHC 15</b>	

### First Year Summer

COM	110	Introduction to Communication	3
ENG	111	Writing and Inquiry	3
---	---	Humanities/Fine Arts Elective	3
---	---	Social/Behavioral Sciences Elective	3
			<b>Total SHC 12</b>

### Second Year Fall

CTS	130	Spreadsheet	3
MED	116	Introduction to Anatomy and Physiology	4
* OST	164	Text Editing Applications	3
OST	247	Procedure Coding	2
OST	248	Diagnostic Coding	2
			<b>Total SHC 14</b>

### Second Year Spring

CTS	230	Advanced Spreadsheet	3
OST	184	Records Management	3
* OST	243	Med Office Simulation	3
---	---	Major Electives	3

Take one of the following courses.

BIO	110	Principles of Biology	4
BIO	140	Environmental Biology	3
BIO	163	Basic Anatomy and Physiology	5
BIO	168	Anatomy and Physiology I	4
MAT	110	Mathematical Measurement and Literacy	3
			<b>Total SHC 15</b>

## Major Electives

Select 3 SHC from the following courses. This may include up to 3 SHC from WBL course/combination of courses.

BUS	137	Principles of Management	3
CTS	115	Information Systems Business Concepts	3
CTS	120	Hardware/Software Support	3
DBA	110	Database Concepts	3
HMT	110	Introduction to Healthcare Management	3
OST	135	Advanced Text Entry and Formatting	4
OST	143	Dental Office Terminology	3
OST	147	Dental Billing and Coding	3
OST	165	Advanced Text Editing Applications	3
OST	244	Medical Document Production	2
OST	245	Dental Office Management	3
OST	246	Dental Office Simulation	3
OST	249	CPC Certification	4
OST	284	Emerging Technologies	2
OST	289	Administrative Office Management	3
WBL	110	World of Work	1
WBL	111	Work-Based Learning I	1
WBL	112	Work-Based Learning I	2
WBL	113	Work-Based Learning I	3
WBL	114	Work-Based Learning I	4
WBL	121	Work-Based Learning II	1
WBL	122	Work-Based Learning II	2
WBL	123	Work-Based Learning II	3
WBL	131	Work-Based Learning III	1
WBL	132	Work-Based Learning III	2
WBL	211	Work-Based Learning IV	1

**Total semester hour credits to complete degree: 71**

## Diploma (D25310)

<http://www.rccc.edu/catalog-2015-2016/?p=688>

### Courses

* CIS	110	Introduction to Computers	3
COM	110	Introduction to Communication	3
ENG	111	Writing and Inquiry	3
* OST	130	Comprehensive Keyboarding	3
* OST	134	Text Entry and Formatting	3
* OST	141	Med Terms I-Med Office	3
* OST	142	Med Terms II-Med Office	3
* OST	148	Medical Coding Billing and Insurance	3
* OST	149	Medical Legal Issues	3
* OST	164	Text Editing Applications	3

* OST	181	Introduction to Office Systems	3
OST	184	Records Management	3
* OST	243	Med Office Simulation	3

**Total semester hour credits to complete diploma: 39**

## Dental Office Essentials Certificate (C25310DS)

<http://www.rccc.edu/catalog-2015-2016/?p=696>

### Courses

CIS	110	Introduction to Computers	3
OST	130	Comprehensive Keyboarding	3
OST	143	Dental Office Terminology	3
OST	181	Introduction to Office Systems	3

**Total semester hour credits to complete certificate: 12**

## Dental Office Management Certificate (C25310DM)

<http://www.rccc.edu/catalog-2015-2016/?p=5004>

### Courses

OST	143	Dental Office Terminology	3
OST	147	Dental Billing and Coding	3
OST	149	Medical Legal Issues	3
OST	245	Dental Office Management	3
OST	246	Dental Office Simulation	3

**Total semester hour credits to complete certificate: 15**

## Medical Billing Essentials Certificate (C25310BE)

<http://www.rccc.edu/catalog-2015-2016/?p=4994>

### Courses

MED	116	Introduction to Anatomy and Physiology	4
OST	141	Med Terms I-Med Office	3
OST	148	Medical Coding Billing and Insurance	3
OST	149	Medical Legal Issues	3

**Total semester hour credits to complete certificate: 13**

## Medical Office Essentials Certificate (C25310ME)

<http://www.rccc.edu/catalog-2015-2016/?p=3590>

OST	130	Comprehensive Keyboarding	3
OST	141	Med Terms I-Med Office	3
OST	149	Medical Legal Issues	3
OST	181	Introduction to Office Systems	3

**Total semester hour credits to complete certificate: 12**

## Procedural and Diagnostic Coding Certificate (C25310MC)

<http://www.rccc.edu/catalog-2015-2016/?p=4999>

C25310BE Medical Billing Essentials Certificate is a prerequisite for C25310MC.

### Courses

OST	141	Med Terms I-Med Office	3
OST	142	Med Terms II-Med Office	3
OST	247	Procedure Coding	2
OST	248	Diagnostic Coding	2
OST	249	CPC Certification	4

**Total semester hour credits to complete certificate: 14**

## Motorsports Management Technology (60270)

<http://www.rccc.edu/catalog-2015-2016/?p=1461>

### Description

The motorsports management technology curriculum is designed to provide students with the knowledge and skills necessary to perform mid-management level functions in motorsports related companies.

Course work includes instruction in general studies, motorsports fundamentals, principles of management, computer applications, accounting, business mathematics, marketing, advertising and sales promotion, and human relations.

Graduates should qualify for employment or advancement in jobs related to management of motorsports teams, events and activities, as well as production and distribution of motorsports products and services.

### Awards

- Associate in Applied Science Degree (A60270)
- Certificate (C60270)

### Contact Information

The Motorsports Management Technology (60270) program is in the RCCC Department of Engineering and Business Technologies. For additional information regarding this program, contact the program chair, Garland Fulp ([garland.fulp@rccc.edu](mailto:garland.fulp@rccc.edu)).

### Gainful Employment

For more information about our graduation rates, the median debt of students who have completed this program and other important information, please view this program in the online RCCC catalog (<http://www.rccc.edu/catalog-2015-2016/?p=1461>)

The \* symbol denotes a core course that may not be substituted.

## Associate in Applied Science Degree (A60270)

<http://www.rccc.edu/catalog-2015-2016/?p=338>

### First Year Fall

* BUS	137	Principles of Management	3
CIS	110	Introduction to Computers	3
ENG	111	Writing and Inquiry	3
* MSM	110	Intro to Motorsports Mgmt	3
* MSM	112	Engine/Drivetrain Fundamentals	2

**Total SHC 14**

### First Year Spring

BUS	121	Business Math	3
CTS	130	Spreadsheet	3
ENG	114	Professional Research and Reporting	3
* MSM	216	Organization Mobility	2

Take one of the following natural sciences/mathematics courses.

BIO	140	Environmental Biology	3
MAT	121	Algebra/Trigonometry I	3
MAT	143	Quantitative Literacy	3
MAT	171	Precalculus Algebra	4
PHY	110	Conceptual Physics	3

**Total SHC 14-15**

### First Year Summer

--	--	Major Electives	6
--	--	Humanities/Fine Arts Elective	3

**Total SHC 9**

## Second Year Fall

BUS	280	REAL Small Business	4	
*	MSM	210	Motorsports Marketing	3
*	MSM	212	Chassis Handling Fundamentals	3
---	---	Social/Behavioral Sciences Elective	3	
---	---	Major Elective	3	
<b>Total SHC</b>			<b>16</b>	

Note: Students wishing to pursue a BS degree in Manufacturing Systems, Motorsports, through North Carolina AandT State University are strongly recommended to take PHY 151 as a major elective or CHM 151 as an approved substitution for a major elective.

## Second Year Spring

BUS	253	Leadership and Management Skills	3	
COM	231	Public Speaking	3	
*	MSM	214	Fabrication Fundamentals	2
*	MSM	218	Safety/Environment	2

Take one of the following courses.

ACC	115	College Accounting	4
ACC	120	Principles of Financial Accounting	4
<b>Total SHC</b>			<b>14</b>

Note: Students who wish to transfer to a four-year school should select ACC 120 instead of ACC 115.

## Major Electives

Select 9 SHC from the following courses. This may include up to 2 SHC from WBL course/combination of courses.

BUS	115	Business Law I	3
BUS	153	Human Resource Management	3
BUS	240	Business Ethics	3
BUS	260	Business Communication	3
JOU	110	Introduction to Journalism	3
MKT	220	Advertising and Sales Promotion	3
MSM	220	Advanced Chassis Analysis	2
MSM	285	Motorsport Capstone Project	2
PHY	151	College Physics I	4
WBL	110	World of Work	1
WBL	111	Work-Based Learning I	1
WBL	112	Work-Based Learning I	2
WBL	121	Work-Based Learning II	1
WLD	112	Basic Welding Processes	2

**Total semester hour credits to complete degree: 67-68**

## Certificate (C60270)

<http://www.rccc.edu/catalog-2015-2016/?p=342>

### Courses

MSM	110	Intro to Motorsports Mgmt	3
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Take 11 SHC from the following courses.

CIS	110	Introduction to Computers	3
MSM	112	Engine/Drivetrain Fundamentals	2

MSM	210	Motorsports Marketing	3
MSM	212	Chassis Handling Fundamentals	3
MSM	214	Fabrication Fundamentals	2
MSM	216	Organization Mobility	2
MSM	218	Safety/Environment	2
MSM	220	Advanced Chassis Analysis	2
WBL	111	Work-Based Learning I	1
WBL	112	Work-Based Learning I	2
WLD	112	Basic Welding Processes	2

**Total semester hour credits to complete certificate: 14**

## Office Administration (25370)

<http://www.rccc.edu/catalog-2015-2016/?p=658>

### Description

The office administration curriculum prepares individuals for positions in administrative support careers. It equips office professionals to respond to the demands of a dynamic computerized workplace.

Students will complete courses designed to develop proficiency in the use of integrated software, oral and written communication, analysis and coordination of office duties and systems, and other support topics. Emphasis is placed on non-technical as well as technical skills.

Graduates should qualify for employment in a variety of positions in business, government, and industry. Job classifications range from entry-level to supervisor to middle management.

### Awards

- Associate in Applied Science Degree (A25370)
- Diploma (D25370)
- Advanced Office Assistant Essentials Certificate (C25370AO)
- Microsoft Excel Certificate (C25370EX)
- Microsoft Word Certificate (C25370WD)
- Office Assistant Essentials Certificate (C25370OE)
- Technology Skills Certificate (C25370TS)

### Additional Information

This program does not certify students to be medical transcriptionists but may provide students with medical transcribing skills to transcribe medical documents.

### Contact Information

The Office Administration (25370) program is in the RCCC Department of Academic Programs. For additional information regarding this program, contact the program chair, Kathy Knight ([kathy.knight@rccc.edu](mailto:kathy.knight@rccc.edu)).

**Gainful Employment**

For more information about our graduation rates, the median debt of students who have completed this program and other important information, please view this program in the online RCCC catalog (<http://www.rccc.edu/catalog-2015-2016/?p=658>)

The \* symbol denotes a core course that may not be substituted.

**Associate in Applied Science Degree (A25370)**

<http://www.rccc.edu/catalog-2015-2016/?p=649>

**Course Requirements**

The following is a suggested program of study for completing this degree in five semesters. Some students' programs of study may be different, depending on their enrollment status (day, evening, full-time or part-time).

**First Year Fall**

BUS	137	Principles of Management	3	
*	CIS	110	Introduction to Computers	3
	OST	130	Comprehensive Keyboarding	3
	OST	136	Word Processing	3
*	OST	181	Introduction to Office Systems	3
<b>Total SHC 15</b>				

**First Year Spring**

ENG	111	Writing and Inquiry	3	
	MAT	110	Mathematical Measurement and Literacy	3
*	OST	134	Text Entry and Formatting	3
	OST	236	Advanced Word Or Information Processing	3
<b>Total SHC 12</b>				

**First Year Summer**

COM	110	Introduction to Communication	3
CTS	115	Info Systems Business Concepts	3
--	--	Humanities/Fine Arts Elective	3
--	--	Social/Behavioral Sciences Elective	3
<b>Total SHC 12</b>			

**Second Year Fall**

CTS	130	Spreadsheet	3	
	OST	135	Advanced Text Entry and Formatting4	3
*	OST	164	Text Editing Applications	3
--	--	Major Electives	3	
<b>Total SHC 13</b>				

**Second Year Spring**

CTS	230	Advanced Spreadsheet	3	
*	OST	184	Records Management	3
	OST	289	Administrative Office Management	3
--	--	Major Electives	3	
<b>Total SHC 12</b>				

**Major Electives**

Select 6 SHC from the following courses. This may include up to 3 SHC from WBL course/combination of courses:

BUS	115	Business Law I	3
BUS	121	Business Math	3
BUS	230	Small Business Management	3
DBA	110	Database Concepts	3
MED	116	Introduction to Anatomy and Physiology	4
OST	141	Med Terms I-Med Office	3
OST	142	Med Terms II-Med Office	3
OST	143	Dental Office Terminology	3
OST	147	Dental Billing and Coding	3
OST	148	Medical Coding Billing and Insurance3	3
OST	149	Medical Legal Issues	3
OST	165	Advanced Text Editing Applications	3
OST	243	Med Office Simulation	3
OST	244	Medical Document Production	2
OST	245	Dental Office Management	3
OST	246	Dental Office Simulation	3
OST	247	Procedure Coding	2
OST	248	Diagnostic Coding	2
OST	249	CPC Certification	4
OST	284	Emerging Technologies	2
WBL	110	World of Work	1
WBL	111	Work-Based Learning I	1
WBL	112	Work-Based Learning I	2
WBL	113	Work-Based Learning I	3
WBL	114	Work-Based Learning I	4
WBL	121	Work-Based Learning II	1
WBL	122	Work-Based Learning II	2
WBL	123	Work-Based Learning II	3
WBL	131	Work-Based Learning III	1
WBL	132	Work-Based Learning III	2
WBL	211	Work-Based Learning IV	1

**Total semester hour credits to complete degree: 64**

**Diploma (D25370)**

<http://www.rccc.edu/catalog-2015-2016/?p=656>

**Courses**

*	CIS	110	Introduction to Computers	3
	COM	110	Introduction to Communication	3
	CTS	115	Information Systems Business Concepts	3
	CTS	130	Spreadsheet	3
	CTS	230	Advanced Spreadsheet	3
	ENG	111	Writing and Inquiry	3
	OST	130	Comprehensive Keyboarding	3
*	OST	134	Text Entry and Formatting	3

OST	136	Word Processing	3	
*	OST	164	Text Editing Applications	3
*	OST	181	Introduction to Office Systems	3
*	OST	184	Records Management	3
	OST	236	Advanced Word Or Information Processing	3

**Total semester hour credits to complete diploma: 39**

### Advanced Office Assistant Essentials Certificate (C25370AO)

<http://www.rccc.edu/catalog-2015-2016/?p=3608>

C25370OE Office Assistant Essentials Certificate is a prerequisite for this certificate.

CTS	130	Spreadsheet	3
OST	134	Text Entry and Formatting	3
OST	164	Text Editing Applications	3
OST	184	Records Management	3
OST	236	Advanced Word Or Information Processing	3

**Total semester hour credits to complete certificate: 15**

### Microsoft Excel Certificate (C25370EX)

<http://www.rccc.edu/catalog-2015-2016/?p=3619>

CIS	110	Introduction to Computers	3
CTS	130	Spreadsheet	3
CTS	230	Advanced Spreadsheet	3
OST	130	Comprehensive Keyboarding	3

**Total semester hour credits to complete certificate: 12**

### Microsoft Word Certificate (C25370WD)

<http://www.rccc.edu/catalog-2015-2016/?p=3615>

OST	130	Comprehensive Keyboarding	3
OST	134	Text Entry and Formatting	3
OST	136	Word Processing	3
OST	236	Advanced Word Or Information Processing	3

**Total semester hour credits to complete certificate: 12**

### Office Assistant Essentials Certificate (C25370OE)

<http://www.rccc.edu/catalog-2015-2016/?p=3606>

CIS	110	Introduction to Computers	3
OST	130	Comprehensive Keyboarding	3
OST	136	Word Processing	3
OST	181	Introduction to Office Systems	3

**Total semester hour credits to complete certificate: 12**

### Technology Skills Certificate (C25370TS)

<http://www.rccc.edu/catalog-2015-2016/?p=3612>

CIS	110	Introduction to Computers	3
CTS	130	Spreadsheet	3
OST	130	Comprehensive Keyboarding	3
OST	136	Word Processing	3

**Total semester hour credits to complete certificate: 12**

# Practical Nursing (45660)

<http://www.rccc.edu/catalog-2015-2016/?p=1056>

## 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.

## Awards

- Diploma (D45660)

## Additional Information

Nursing Education Checklist

<http://www.rccc.edu/onestop/87/admissions-checklist-for-nursing-programs/>

Health Information Sessions

<http://www.rccc.edu/healthpublicservices/information-sessions-for-health-public-services-programs/>

Admission Requirements

<http://www.rccc.edu/onestop/95/admission-requirements-for-nursing-education-programs/>

LPN Philosophy

<http://www.rccc.edu/healthpublicservices/practical-nursing-program-philosophy/>

Competency Standards

<http://www.rccc.edu/onestop/124/competency-standards-and-progression-policy-for-nursing-programs/>

Advanced Placement Policy

<http://www.rccc.edu/onestop/111/advanced-placement-policy-for-practical-nursing-programs/>

Attendance Requirements

<http://www.rccc.edu/onestop/120/attendance-requirements-for-nursing-programs/>

Clinical Behavior Policy

<http://www.rccc.edu/onestop/122/clinical-behavior-policies-for-nursing-programs/>

Graduation Policy

<http://www.rccc.edu/onestop/129/graduation-policy-for-nursing-programs/>

## Contact Information

The Practical Nursing (45660) program is in the RCCC Department of Health and Education Programs. For additional information regarding this program, contact the director, Cathy Norris ([cathy.norris@rccc.edu](mailto:cathy.norris@rccc.edu)).

## Gainful Employment

For more information about our graduation rates, the median debt of students who have completed this program and other important information, please view this program in the online RCCC catalog (<http://www.rccc.edu/catalog-2015-2016/?p=1056>)

The \* symbol denotes a core course that may not be substituted.

## Diploma (D45660)

<http://www.rccc.edu/catalog-2015-2016/?p=435>

### Fall Semester

BIO	163	Basic Anatomy and Physiology	5
* NUR	101	Practical Nursing I	11
PSY	110	Life Span Development	3
			<b>Total SHC 19</b>

### Spring Semester

ENG	111	Writing and Inquiry	3
* NUR	102	Practical Nursing II	10
			<b>Total SHC 13</b>

### Summer Term

* NUR	103	Practical Nursing III	9
			<b>Total SHC 9</b>

**Total semester hour credits to complete diploma: 41**

### Note 1

Class sessions and clinical rotations in NUR courses may be scheduled during weekdays, evenings, or weekends.

### Note 2

For students enrolled in the Associate Degree Nursing or the Practical Nursing programs, numerical grades below 'B' in all required nursing courses are considered unsatisfactory attainment of course competencies.

### Note 3

Students considering entering the Associate Degree Nursing (ADN) Program should take the following: BIO 168, BIO 169, PSY 150, and PSY 241 instead of BIO 163 and PSY 110 and request a substitution form from their advisor prior to registration.

# Radiography (45700)

<http://www.rccc.edu/catalog-2015-2016/?p=967>

## Description

The radiography curriculum prepares the graduate to be a radiographer, a skilled health care professional who uses radiation to produce images of the human body.

Course work includes clinical rotations to area health care facilities, radiographic exposure, image processing, radiographic procedures, physics, pathology, patient care and management, radiation protection, quality assurance, anatomy and physiology, and radiobiology.

Graduates of accredited programs are eligible to apply to take the American Registry of Radiologic Technologists' national examination for certification and registration as medical radiographers. Graduates may be employed in hospitals, clinics, physicians' offices, medical laboratories, government agencies, and industry.

## Awards

- Associate in Applied Science Degree (A45700)

## Additional Information

Checklist for Radiography

<http://www.rccc.edu/onestop/170/admission-checklist-for-radiography/>

Radiography Health Information Sessions

<http://www.rccc.edu/healthpublicservices/radiography-information-sessions/>

Admission Requirements for Radiography

<http://www.rccc.edu/onestop/173/admission-requirements-for-radiography/>

Radiography Mission Statement

<http://www.rccc.edu/healthpublicservices/radiography-program-mission-statement/>

## Contact Information

The Radiography (45700) program is in the RCCC Department of Health and Education Programs. For additional information regarding this program, contact the program chair, Kelly McCowan ([kelly.mccowan@rccc.edu](mailto:kelly.mccowan@rccc.edu)).

## Gainful Employment

For more information about our graduation rates, the median debt of students who have completed this program and other important information, please view this program in the online RCCC catalog (<http://www.rccc.edu/catalog-2015-2016/?p=967>)

The \* symbol denotes a core course that may not be substituted.

# Associate in Applied Science Degree (A45700)

<http://www.rccc.edu/catalog-2015-2016/?p=970>

## First Year Fall

BIO	168	Anatomy and Physiology I	4
* RAD	110	Rad Intro and Patient Care	3
* RAD	111	RAD Procedures I	4
* RAD	151	RAD Clinical Ed I	2

Take one of the following courses.

MAT	143	Quantitative Literacy	3
MAT	171	Precalculus Algebra	4

**Total SHC 16**

## First Year Spring

BIO	169	Anatomy and Physiology II	4
ENG	111	Writing and Inquiry	3
* RAD	112	RAD Procedures II	4
* RAD	121	Radiographic Imaging I	3
* RAD	161	RAD Clinical Ed II	5

**Total SHC 19**

## First Year Summer

* RAD	122	Radiographic Imaging II	2
* RAD	131	Radiographic Physics I	2
* RAD	171	RAD Clinical Ed III	4

**Total SHC 8**

## Second Year Fall

PSY	150	General Psychology	3
* RAD	211	Radiographic Procedures III	3
* RAD	231	Radiographic Physics II	2
* RAD	241	Radiobiology/Protection	2
* RAD	251	RAD Clinical Ed IV	7

**Total SHC 17**

## Second Year Spring

COM	231	Public Speaking	3
* RAD	245	Image Analysis	2
* RAD	261	Radiographic Clinical Education V	7
* RAD	271	Radiography Capstone	1
---	---	Humanities/Fine Arts Elective	3

**Total SHC 16**

**Total semester hour credits to complete degree: 76**

# School-Age Education (55440)

<http://www.rccc.edu/catalog-2015-2016/?p=835>

## Description

The school-age education curriculum prepares individuals to work with children in elementary through middle grades in diverse learning environments. Students will combine learned theories with practice in actual settings with school-age children under the supervision of qualified teachers.

Course work includes child growth and development; computer technology in education; physical and nutritional needs of school-age children; care and guidance of school-age children; and communication skills with families and children. Students will foster the cognitive and language, physical and motor, social and emotional, and creative development of school-age populations.

Graduates are prepared to plan and implement developmentally appropriate programs in school-aged environments. Employment opportunities include school-age teachers in child care programs, before- and after-school programs, paraprofessional positions in public and private schools, recreational centers, and other programs that work with school-age populations.

## Awards

- Associate in Applied Science Degree and #8211; General Program (A55440A)

## Additional Information

North Carolina Child Care Licensing Regulations require that all volunteers working in the Early Childhood field obtain a federal criminal background check. Because most of our courses require students to enter child care centers and schools, all students enrolled in the Early Childhood and School Age programs are required to obtain a federal criminal background check and submit to the program chair a copy of the qualification letter they receive from the state. A negative report may prevent students from participating in required courses, which means that the student cannot complete the program requirements. An application process will be required prior to students entering into EDU 214 and EDU 285. Students must have at least a 2.5 GPA, C or higher in Early Childhood courses and be in their last two semesters in order to register for EDU 214 and EDU 285. Please contact the program chair of School-Age Education if you have any questions.

See Early Childhood Education Programs

<https://www.rccc.edu/catalog-2015-2016/833/early-childhood-education-55220/>

See Infant/Toddler Care Certificate

<https://www.rccc.edu/catalog-2015-2016/2014/2014/05/13/infanttoddler-care-55290/>

## Contact Information

The School-Age Education (55440) program is in the RCCC Department of Health and Education Programs. For additional information regarding this program, contact the program chair, Jeannie Morgan-Campola, (jeanne.morgancampola@rccc.edu).

## Gainful Employment

For more information about our graduation rates, the median debt of students who have completed this program and other important information, please view this program in the online RCCC catalog (<http://www.rccc.edu/catalog-2015-2016/?p=835>)

The \* symbol denotes a core course that may not be substituted.

## Associate in Applied Science Degree – General Program (A55440A)

<http://www.rccc.edu/catalog-2015-2016/?p=864>

## Course Requirements

The following is a suggested program of study for completing this degree in five semesters. Some students' programs of study may be different, depending on their enrollment status (day, evening, full-time or part-time).

### First Year Fall

* EDU	118	Principles and Practices of the Instructional Assistant	3
EDU	119	Introduction to Early Childhood Education	4
* EDU	144	Child Development I	3
* EDU	163	Classroom Management and Instruction	3
* EDU	271	Educational Technology	3

**Total SHC 16**

### First Year Spring

* EDU	131	Child, Family, and Community	3
* EDU	145	Child Development II	3
EDU	146	Child Guidance	3
EDU	151	Creative Activities	3
ENG	111	Writing and Inquiry	3

**Total SHC 15**

### First Year Summer

COM	231	Public Speaking	3
PSY	150	General Psychology	3

Take one of the following courses.

ENG	112	Writing and Research in the Disciplines	3
ENG	113	Literature-Based Research	3
ENG	114	Professional Research and Reporting3	

**Total SHC 9**

### Second Year Fall

EDU	214	Early Childhood Intermediate Practicum	4
*	EDU 221	Children With Exceptionalities	3
	EDU 235	School-Age Development and Programs	3
	EDU 251	Exploration Activities	3
---	---	Humanities/Fine Arts Elective	3

**Total SHC 16**

Note: Students may take any of the Humanities/Fine Arts electives except for ENG courses.

### Second Year Spring

EDU	281	Instructional Strategies in Reading and Writing	3
	EDU 282	Early Childhood Literature	3
*	EDU 285	Internship Experiences-School Age	4
*	EDU 289	Advanced Issues/School Age	2

Take one of these natural sciences/mathematics courses.

AST	111	Descriptive Astronomy	3
BIO	111	General Biology I	4
BIO	140	Environmental Biology	3
CHM	121	Foundations of Chemistry	3
MAT	110	Mathematical Measurement and Literacy	3
MAT	143	Quantitative Literacy	3
PHY	110	Conceptual Physics	3

**Total SHC 15**

Note: The requirement for meeting basic mathematical computation skills must be met for the Natural Sciences/Mathematics course. This can be accomplished by receiving an acceptable score on the basic math section of the placement test or successfully completing DMA-010, DMA-020, and DMA-030.

**Total semester hour credits to complete degree: 71**

### Criminal Background Check

North Carolina Child Care Licensing Regulations require that all volunteers working in the Early Childhood field obtain a criminal background check. Because most of our courses require students to enter child care centers and schools, all students enrolled in the Early Childhood and School Age programs are required to obtain a criminal background check and submit to the program chair a copy of the clearance letter they receive from the state. A negative report may prevent students from participating in required courses, which means that the student cannot complete the program requirements.

### Practicum Application

An application process will be required prior to students entering into EDU 214 and EDU 285. Students must have at least a 2.5 GPA, C or higher in Early Childhood courses and be in their last two semesters in order to register for EDU 214 and EDU 285. Please contact the program chair of School-Age Education if you have any questions.

## Welding Technology (50420)

<http://www.rccc.edu/catalog-2015-2016/?p=1729>

### 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 students 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.

### Awards

- Associate in Applied Science Degree (A50420)
- Diploma (D50420)
- Advanced TIG Welding Certificate (C50420AT)
- Advanced Welding Certificate (C50420AD)
- Basic Welding Certificate (C50420BC)
- High Performance Fabrication Welding Certificate (C50420HP)
- Intermediate Welding Certificate (C50420IN)
- MIG Welding Certificate (C50420MI)
- Stick Welding Certificate (C50420ST)
- TIG Welding Certificate (C50420TI)

### Additional Information

At the end of each semester, students whose skills qualify them to take a qualification test (certification test) will need to fill out the request form available in the welding area and submit it to their instructors. With the approval of the instructors, students will be given the opportunity to take the test.

### Contact Information

The Welding Technology (50420) program is in the RCCC Department of Engineering and Business Technologies. For additional information regarding this program, contact the program chair, Robert Simpson (robert.simpson@rccc.edu).

### Gainful Employment

For more information about our graduation rates, the median debt of students who have completed this program and other important information, please view this program in the online RCCC catalog (<http://www.rccc.edu/catalog-2015-2016/?p=1729>)

The \* symbol denotes a core course that may not be substituted.

## Associate in Applied Science Degree (A50420)

<http://www.rccc.edu/catalog-2015-2016/?p=539>

### Course Requirements

The following is a suggested program of study for completing this degree in six semesters. Some students' programs of study may be different, depending on their enrollment status (day, evening, full-time or part-time).

#### First Year Fall

CIS 110	Introduction to Computers	3
MAT 121	Algebra/Trigonometry I	3
* WLD 110	Cutting Processes	2
* WLD 115	SMAW (Stick) Plate	5
* WLD 131	GTAW (TIG) Plate	4

**Total SHC 17**

Note: Earn Basic Welding Certificate: The Basic Welding Certificate (C50420BC) is earned upon successful completion of the First Year Fall Semester courses.

#### First Year Spring

WLD 116	SMAW (stick) Plate/Pipe	4
* WLD 121	GMAW (MIG) FCAW/Plate	4
WLD 132	GTAW (TIG) Plate/Pipe	3
* WLD 141	Symbols and Specifications	3

**Total SHC 14**

Note: Earn Intermediate Welding Certificate: The Intermediate Welding Certificate (C50420IN) is earned upon successful completion of the First Year Spring Semester courses.

#### First Year Summer

ENG 111	Writing and Inquiry	3
WLD 122	GMAW (MIG) Plate/Pipe	3
WLD 151	Fabrication I	4

**Total SHC 10**

Note: Earn Welding Diploma: The Welding Diploma (D50420) is earned upon successful completion of the First Year Fall, Spring, and Summer courses.

#### Second Year Fall

DFT 151	CAD I	3
WLD 143	Welding Metallurgy	2
WLD 231	GTAW (TIG) Pipe	3
WLD 261	Certification Practices	2

Take one of the following courses.

HUM 110	Technology and Society	3
HUM 115	Critical Thinking	3

**Total SHC 13**

#### Second Year Spring

WLD 215	SMAW (stick) Pipe	4
WLD 262	Inspection and Testing	3
WLD 265	Automated Welding/Cutting	4
---	Major Electives	2
---	Social/Behavioral Sciences Elective	3

**Total SHC 16**

#### Second Year Summer

Take one of the following courses.

WBL 113	Work-Based Learning I	3
WLD 251	Fabrication II	3

Take one of the following courses.

COM 110	Introduction to Communication	3
COM 120	Intro to Interpersonal Communication	3
COM 231	Public Speaking	3
ENG 114	Professional Research and Reporting	3

**Total SHC 6**

Note: WBL coursework is limited to 3 SHC.

#### Major Electives

Select a minimum of 2 SHC from the following courses.

DFT 152	CAD II	3
MEC 111	Machine Processes I	3
PHY 110	Conceptual Physics	3
PHY 110A	Conceptual Physics Lab	1
WLD 111	Oxy-Fuel Welding	2
WLD 221	GMAW (MIG) Pipe	3

**Total semester hour credits to complete degree: 76**

## Diploma (D50420)

<http://www.rccc.edu/catalog-2015-2016/?p=544>

#### Fall Semester

CIS 110	Introduction to Computers	3
MAT 121	Algebra/Trigonometry I	3
* WLD 110	Cutting Processes	2
* WLD 115	SMAW (Stick) Plate	5
* WLD 131	GTAW (TIG) Plate	4

**Total SHC 17**

Note: Earn Basic Welding Certificate: The Basic Welding Certificate (C50420BC) is earned upon successful completion of the Fall Semester courses.

### Spring Semester

WLD 116	SMAW (stick) Plate/Pipe	4
* WLD 121	GMAW (MIG) FCAW/Plate	4
WLD 132	GTAW (TIG) Plate/Pipe	3
* WLD 141	Symbols and Specifications	3
<b>Total SHC 14</b>		

Note: Earn Intermediate Welding Certificate: The Intermediate Welding Certificate (C50420IN) is earned upon successful completion of the Spring Semester courses.

### Summer Term

ENG 111	Writing and Inquiry	3
WLD 122	GMAW (MIG) Plate/Pipe	3
WLD 151	Fabrication I	4
<b>Total SHC 10</b>		

**Total semester hour credits to complete diploma: 41**

### Advanced TIG Welding Certificate (C50420AT)

<http://www.rccc.edu/catalog-2015-2016/?p=577>

#### Courses

WLD 110	Cutting Processes	2
WLD 131	GTAW (TIG) Plate	4
WLD 132	GTAW (TIG) Plate/Pipe	3
WLD 141	Symbols and Specifications	3
WLD 231	GTAW (TIG) Pipe	3

**Total semester hour credits to complete certificate: 15**

### Advanced Welding Certificate (C50420AD)

<http://www.rccc.edu/catalog-2015-2016/?p=558>

C50420BC Basic Welding Certificate and C50420IN Intermediate Welding Certificate are prerequisites for this certificate.

#### Courses

WLD 121	GMAW (MIG) FCAW/Plate	4
WLD 122	GMAW (MIG) Plate/Pipe	3

Take one of the following groups.

#### Group One

WLD 110	Cutting Processes	2
WLD 115	SMAW (Stick) Plate	5
WLD 151	Fabrication I	4

#### Group Two

WLD 115	SMAW (Stick) Plate	5
WLD 215	SMAW (stick) Pipe	4

#### Group Three

WLD 131	GTAW (TIG) Plate	4
WLD 132	GTAW (TIG) Plate/Pipe	3
WLD 231	GTAW (TIG) Pipe	3

**Total semester hour credits to complete certificate: 16**

### Basic Welding Certificate (C50420BC)

<http://www.rccc.edu/catalog-2015-2016/?p=550>

#### Courses

CIS 110	Introduction to Computers	3
MAT 121	Algebra/Trigonometry I	3
WLD 110	Cutting Processes	2
WLD 115	SMAW (Stick) Plate	5
WLD 131	GTAW (TIG) Plate	4

**Total semester hour credits to complete certificate: 17**

### High Performance Fabrication Welding Certificate (C50420HP)

<http://www.rccc.edu/catalog-2015-2016/?p=574>

#### Courses

WLD 110	Cutting Processes	2
WLD 121	GMAW (MIG) FCAW/Plate	4
WLD 131	GTAW (TIG) Plate	4
WLD 141	Symbols and Specifications	3

**Total semester hour credits to complete certificate: 13**

### Intermediate Welding Certificate (C50420IN)

<http://www.rccc.edu/catalog-2015-2016/?p=553>

C50420BC Basic Welding Certificate is a prerequisite for this certificate.

#### Courses

WLD 116	SMAW (stick) Plate/Pipe	4
WLD 121	GMAW (MIG) FCAW/Plate	4
WLD 132	GTAW (TIG) Plate/Pipe	3
WLD 141	Symbols and Specifications	3

**Total semester hour credits to complete certificate: 14**

## MIG Welding Certificate (C50420MI)

<http://www.rccc.edu/catalog-2015-2016/?p=570>

### Courses

WLD 110	Cutting Processes	2
WLD 121	GMAW (MIG) FCAW/Plate	4
WLD 122	GMAW (MIG) Plate/Pipe	3
WLD 141	Symbols and Specifications	3

**Total semester hour credits to complete certificate: 12**

## Stick Welding Certificate (C50420ST)

<http://www.rccc.edu/catalog-2015-2016/?p=561>

### Courses

WLD 110	Cutting Processes	2
WLD 115	SMAW (Stick) Plate	5
WLD 116	SMAW (stick) Plate/Pipe	4
WLD 141	Symbols and Specifications	3

**Total semester hour credits to complete certificate: 14**

## TIG Welding Certificate (C50420TI)

<http://www.rccc.edu/catalog-2015-2016/?p=567>

### Courses

WLD 110	Cutting Processes	2
WLD 131	GTAW (TIG) Plate	4
WLD 132	GTAW (TIG) Plate/Pipe	3
WLD 141	Symbols and Specifications	3

**Total semester hour credits to complete certificate: 12**



# Course Descriptions



# 2015-2016 Course Descriptions

## Courses

The courses listed in this catalog constitute the content of the curriculum programs of the college. The course prefixes are listed in alphabetical order.

## Credit Hours

Credit Hours are awarded as follows:

- Credit of one semester hour is awarded for each 16 hours of “class work”. Class work is lecture and other classroom instructions. Class work is under the supervision of an instructor.
- Credit of one semester hour is awarded for each 32 hours of “experiential laboratory work”. Experiential laboratory work means instruction given to a student by an instructor to increase the student’s knowledge and skills without immediate student application.
- Credit of one semester hour is awarded for each 48 hours of “faculty directed laboratory work”. Faculty directed laboratory work involves structured and coordinated demonstration by an instructor with an immediate student application.
- Credit of one semester hour is awarded for each 48 hours of “clinical practice”. Clinical practice is a structured, faculty-directed learning experience in a health science program which develops job proficiency. Clinical practice requires significant preparation, coordination and scheduling by the facility and is under the supervision of an instructor or preceptor who is qualified for the particular program.
- Credit of one semester hour is awarded for each 160 hours of ‘work experience’ such as cooperative education, practicums, and internships. Work

experience involves the development of job skills by providing the student with employment that is directly related to, and coordinated with, the education program. Student activity in work experience is planned and coordinated by a college representative, and the employer is responsible for the control and supervision of the student on the job.

## Contact Hours

The contact hours for a course are the sum of the lecture hours and lab, clinical or work experience.

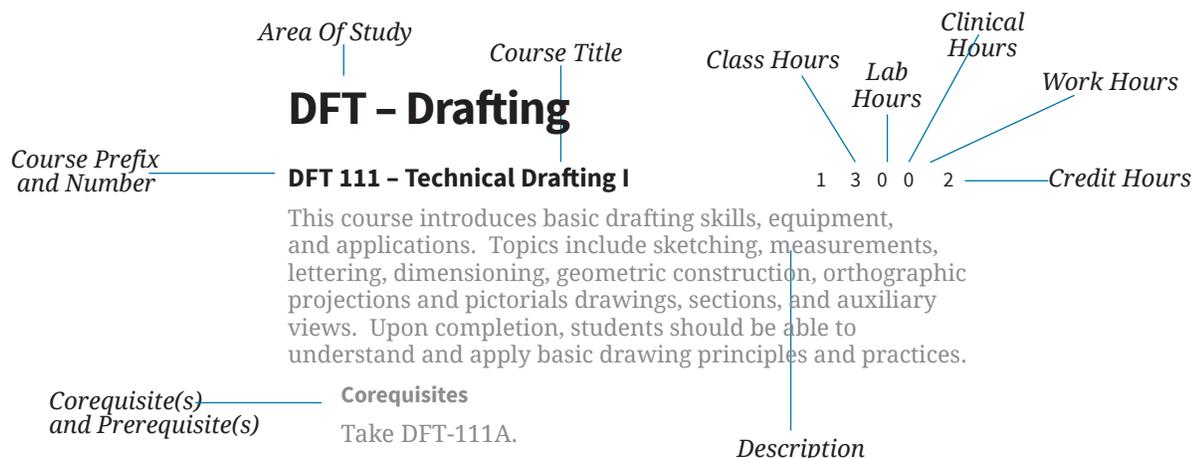
## Writing Intensive Courses

Writing intensive courses are courses in which students write to learn. Writing assignments may range from highly informal, such as journals, to the highly formal, such as research papers. Normally, a writing intensive course will contain a mixture of informal and formal writing assignments which will account for at least seventy percent of a student’s overall evaluation in the course. It is important to note that the catalog’s designation of a course as “writing intensive” indicates only Rowan-Cabarrus Community College’s internal curriculum designation of that course as writing intensive. Students intending to transfer credit to other colleges and universities should consult with those institutions to determine if the course in question will be accepted as writing intensive.

## Developmental/Non-Credit Courses

Non-Credit courses are numbered below 100. Students may be required to take one or more developmental courses due to level of proficiency, or they may choose developmental courses if they feel the need for review. Students level of proficiency can be evaluated by SAT/ACT, college placement test, or high school GPA. Non-credit courses provide the necessary refresher for success in a given curriculum.

Developmental courses are designed to prepare students for college level work and will not satisfy credit hours for any degree, diploma, or certificate program. They will not transfer to a four-year institution, but will transfer to any of the community colleges within the NC Community College System. Credit earned for these courses will only satisfy the prerequisites for entry into a curriculum level course.



## ACA – Academic Related

### ACA 115 – Success and Study Skills 0 2 0 0 1

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.

It is highly encouraged that this course be taken during the first year as a "first year" or "freshman" seminar.

### ACA 122 – College Transfer Success 0 2 0 0 1

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.

## ACC – Accounting

### ACC 115 – College Accounting 3 2 0 0 4

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.

### ACC 120 – Principles of Financial Accounting 3 2 0 0 4

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.

#### Prerequisites

Take 2 groups; #Take MAT-070, DMA-010 through DMA-050, or any 100 level MAT course; #Take CTS-060 or CTS-080;

### ACC 121 – Princ. of Managerial Accounting 3 2 0 0 4

This course includes a greater emphasis on managerial and cost accounting skills. Emphasis is placed on managerial accounting concepts for external and internal analysis, reporting and decision-making. Upon completion, students should be able to analyze and interpret transactions relating to managerial concepts including product-costing systems.

#### Prerequisites

Take ACC-120

### ACC 129 – Individual Income Taxes 2 2 0 0 3

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.

### ACC 132 – NC Business Taxes 2 0 0 0 2

This course introduces the relevant laws governing North Carolina taxes as they apply to business. Topics include sales taxes, income taxes for business entities, payroll taxes, unemployment taxes, and other taxes pertaining to the State of North Carolina. Upon completion, students should be able to maintain a company's records to comply with the laws governing North Carolina business taxes.

### ACC 140 – Payroll Accounting 1 2 0 0 2

This course covers federal and state laws pertaining to wages, payroll taxes, payroll tax forms, and journal and general ledger transactions. Emphasis is placed on computing wages; calculating social security, income, and unemployment taxes; preparing appropriate payroll tax forms; and journalizing/posting transactions. Upon completion, students should be able to analyze data, make appropriate computations, complete forms, and prepare accounting entries using appropriate technology.

#### Prerequisites

Take One: ACC-115 or ACC-120

### ACC 149 – Intro to Acc Spreadsheets 1 2 0 0 2

This course provides a working knowledge of computer spreadsheets and their use in accounting. Topics include pre-programmed problems, model-building problems, beginning-level macros, graphics, and what-if analysis enhancements of template problems. Upon completion, students should be able to use a computer spreadsheet to complete many of the tasks required in accounting.

#### Prerequisites

Take One: ACC-115 or ACC-120

**ACC 150 – Accounting Software Applications** 1 2 0 0 2

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 solve accounting problems.

**Prerequisites**

Take One: ACC-115 or ACC-120

**ACC 175 – Hotel and Restaurant Accounting** 3 2 0 0 4

This course covers generally accepted accounting principles and the uniform system of accounts for small hotels and motels of the American Hotel and Motel Association. Emphasis is placed on the accounting cycle, analysis of financial statements, and payroll procedures including treatment of tips. Upon completion, students should be able to demonstrate competence in the accounting principles and procedures used in hotels and restaurants.

**ACC 215 – Ethics in Accounting** 3 0 0 0 3

This course introduces students to professional codes of conduct and ethics adopted by professional associations and state licensing boards for accountants, auditors, and fraud examiners. Topics include research and discussion of selected historical and contemporary ethical cases and issues as they relate to accounting and business. Upon completion, students should be able to apply codes, interpret facts and circumstances, as they relate to accounting firms and business activities.

**Prerequisites**

Take ACC-121

**ACC 220 – Intermediate Accounting I** 3 2 0 0 4

This course is a continuation of the study of accounting principles with in-depth coverage of theoretical concepts and financial statements. Topics include generally accepted accounting principles and extensive analysis of balance sheet components. Upon completion, students should be able to demonstrate competence in the conceptual framework underlying financial accounting, including the application of financial standards.

**Prerequisites**

Take ACC-120

**ACC 221 – Intermediate Accounting II** 3 2 0 0 4

This course is a continuation of ACC 220. Emphasis is placed on special problems which may include leases, bonds, investments, ratio analyses, present value applications, accounting changes, and corrections. Upon completion, students should be able to demonstrate an understanding of the principles involved and display an analytical problem-solving ability for the topics covered.

**Prerequisites**

Take ACC-220

**ACC 225 – Cost Accounting** 3 0 0 0 3

This course introduces the nature and purposes of cost accounting as an information system for planning and control. Topics include direct materials, direct labor, factory overhead, process, job order, and standard cost systems. Upon completion, students should be able to demonstrate an understanding of the principles involved and display an analytical problem-solving ability for the topics covered.

**Prerequisites**

Take ACC-121

**ACC 227 – Practices in Accounting** 3 0 0 0 3

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.

**Prerequisites**

Take ACC-220

**ACC 240 – Gov and Not-For-Profit Acct** 3 0 0 0 3

This course introduces principles and procedures applicable to governmental and not-for-profit organizations. Emphasis is placed on various budgetary accounting procedures and fund accounting. Upon completion, students should be able to demonstrate an understanding of the principles involved and display an analytical problem-solving ability for the topics covered.

**Prerequisites**

Take ACC-121

**ACC 250 – Advanced Accounting** 3 0 0 0 3

This course is designed to analyze the special accounting issues, which may include business combinations, partnerships, international accounting, estates, and trusts. Emphasis is placed on analyzing transactions and preparing working papers and financial statements. Upon completion, students should be able to solve a wide variety of problems by advanced application of accounting principles and procedures.

**Prerequisites**

Take ACC-220

**ACC 268 – Info Systems and Internal Controls** 3 0 0 0 3

This course covers the design and operation of accounting information systems, with emphasis placed upon transaction cycles and the necessary controls for reliable data. Topics include accounting procedures; authorizing, documentation, and monitoring; flowcharting, data flow diagrams, and scheduling; and some auditing concepts. Upon completion, students should be able to demonstrate an analytical problem-solving ability to communicate effectively their analysis in written and oral presentations.

**Prerequisites**

Take ACC-121

**ACC 269 – Auditing and Assurance Services** 3 0 0 0 3

This course introduces selected topics pertaining to the objectives, theory and practices in engagements providing auditing and other assurance services. Topics include planning, conducting and reporting, with emphasis on the related professional ethics and standards. Upon completion, students should be able to demonstrate an understanding of the types of professional services, the related professional standards, and engagement methodology.

**Prerequisites**

Take ACC-220

**ACC 270 – International Accounting** 3 0 0 0 3

This course includes identifying, recording, and interpreting financial information for accounting systems used in different countries. Topics include currency exchange rates, methods of setting and selecting transfer prices, practices used to account for rates of inflation, and major types of taxes. Upon completion, students should be able to describe accounting systems and their impacts on different currencies and demonstrate a basic knowledge of international accounting.

**Prerequisites**

Take ACC-120

**AHR – Air Conditioning, Heating and Refrigeration**

**AHR 110 – Introduction to Refrigeration** 2 6 0 0 5

This course introduces the basic refrigeration process used in mechanical refrigeration and air conditioning systems. Topics include terminology, safety, and identification and function of components; refrigeration cycle; and tools and instrumentation used in mechanical refrigeration systems. Upon completion, students should be able to identify refrigeration systems and components, explain the refrigeration process, and use the tools and instrumentation of the trade.

**AHR 111 – HVACR Electricity** 2 2 0 0 3

This course introduces electricity as it applies to HVACR equipment. Emphasis is placed on power sources, interaction of electrical components, wiring of simple circuits, and the use of electrical test equipment. Upon completion, students should be able to demonstrate good wiring practices and the ability to read simple wiring diagrams.

**AHR 112 – Heating Technology** 2 4 0 0 4

This course covers the fundamentals of heating including oil, gas, and electric heating systems. Topics include safety, tools and instrumentation, system operating characteristics, installation techniques, efficiency testing, electrical power, and control systems. Upon completion, students should be able to explain the basic oil, gas, and electrical heating systems and describe the major components of a heating system.

**AHR 113 – Comfort Cooling** 2 4 0 0 4

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.

**Prerequisites**

Take AHR-110

**AHR 114 – Heat Pump Technology** 2 4 0 0 4

This course covers the principles of air source and water source heat pumps. Emphasis is placed on safety, modes of operation, defrost systems, refrigerant charging, and system performance. Upon completion, students should be able to understand and analyze system performance and perform routine service procedures.

**Prerequisites**

Take One: AHR-110 or AHR-113

**AHR 115 – Refrigeration Systems** 1 3 0 0 2

This course introduces refrigeration systems and applications. Topics include defrost methods, safety and operational control, refrigerant piping, refrigerant recovery and charging, and leak testing. Upon completion, students should be able to assist in installing and testing refrigeration systems and perform simple repairs.

**Prerequisites**

Take AHR-110

**AHR 130 – HVAC Controls** 2 2 0 0 3

This course covers the types of controls found in residential and commercial comfort systems. Topics include electrical and electronic controls, control schematics and diagrams, test instruments, and analysis and troubleshooting of electrical systems. Upon completion, students should be able to diagnose and repair common residential and commercial comfort system controls.

**Prerequisites**

Take One: AHR-111, ELC-111, or ELC-112

**AHR 135 – Transport Refrigeration** 2 6 0 0 4

This course introduces the equipment and components commonly found in commercial transport refrigeration systems. Topics include compressors, evaporators, metering devices, accessories, and related electrical components. Upon completion, students should be able to safely maintain, troubleshoot, and repair transport refrigeration components.

**Prerequisites**

Take AHR-110

**AHR 151 – HVAC Duct Systems I** 1 3 0 0 2

This course introduces the techniques used to lay out and fabricate duct work commonly found in HVAC systems. Emphasis is placed on the skills required to fabricate duct work. Upon completion, students should be able to lay out and fabricate simple duct work.

**AHR 152 – HVAC Duct Systems II** 1 3 0 0 2

This course introduces the techniques used to lay out and fabricate more advanced types of duct work found in HVAC systems. Emphasis is placed on the skills required to work with complex rectangular and round fittings and transitions. Upon completion, students should be able to lay out and fabricate complex rectangular and round fittings.

**Prerequisites**

Take AHR-151

**AHR 160 – Refrigerant Certification** 1 0 0 0 1

This course covers the requirements for the EPA certification examinations. Topics include small appliances, high pressure systems, and low pressure systems. Upon completion, students should be able to demonstrate knowledge of refrigerants and be prepared for the EPA certification examinations.

**AHR 211 – Residential System Design** 2 2 0 0 3

This course introduces the principles and concepts of conventional residential heating and cooling system design. Topics include heating and cooling load estimating, basic psychometrics, equipment selection, duct system selection, and system design. Upon completion, students should be able to design a basic residential heating and cooling system.

**AHR 212 – Advanced Comfort Systems** 2 6 0 0 4

This course covers water-cooled comfort systems, water-source/geothermal heat pumps, and high efficiency heat pump systems including variable speed drives and controls. Emphasis is placed on the application, installation, and servicing of water-source systems and the mechanical and electronic control components of advanced comfort systems. Upon completion, students should be able to test, analyze, and troubleshoot water-cooled comfort systems, water-source/geothermal heat pumps, and high efficiency heat pumps.

**Prerequisites**

Take AHR-114

**AHR 213 – HVACR Building Code** 1 2 0 0 2

This course covers the North Carolina codes that are applicable to the design and installation of HVACR systems. Topics include current North Carolina codes as applied to HVACR design, service, and installation. Upon completion, students should be able to demonstrate the correct usage of North Carolina codes that apply to specific areas of the HVACR trade.

**AHR 215 – Commercial HVAC Controls** 1 3 0 0 2

This course introduces HVAC control systems used in commercial applications. Topics include electric/electronic control systems, pneumatic control systems, DDC temperature sensors, humidity sensors, pressure sensors, wiring, controllers, actuators, and controlled devices. Upon completion, students should be able to verify or correct the performance of common control systems with regard to sequence of operation and safety.

**Prerequisites**

Take One: AHR-111, ELC-111, or ELC 112

**AHR 225 – Commercial System Design** 2 3 0 0 3

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.

**Prerequisites**  
Take AHR-211;

**AHR 235 – Refrigeration Design** 2 2 0 0 3

This course covers the principles of commercial refrigeration system operation and design. Topics include walk-in coolers, walk-in freezers, system components, load calculations, equipment selection, defrost systems, refrigerant line sizing, and electric controls. Upon completion, students should be able to design, adjust, and perform routine service procedures on a commercial refrigeration system.

**Prerequisites**  
Take AHR-110

**AHR 247 – Atypical Systems** 1 3 0 0 2

This course introduces refrigeration systems utilizing non-fluorocarbon based refrigerants. Topics include mechanical compression ammonia systems, ammonia absorption systems, and other absorption type systems. Upon completion, students should be able to demonstrate an understanding of the operation of certain non-fluorocarbon based refrigeration systems.

**Prerequisites**  
Take AHR-110

**AHR 250 – HVAC System Diagnostics** 0 4 0 0 2

This course is a comprehensive study of air conditioning, heating, and refrigeration system diagnostics and corrective measures. Topics include advanced system analysis, measurement of operating efficiency, and inspection and correction of all major system components. Upon completion, students should be able to restore a residential or commercial AHR system so that it operates at or near manufacturers' specifications.

**Corequisites**  
AHR-212

**AHR 255 – Indoor Air Quality** 1 2 0 0 2

This course introduces the techniques of assessing and maintaining the quality of the indoor environment in residential and commercial structures. Topics include handling and investigating complaints, filter selection, humidity control, testing for sources of carbon monoxide, impact of mechanical ventilation, and building and duct pressures. Upon completion, students should be able to assist in investigating and solving common indoor air quality problems.

**AHR 263 – Energy Management** 1 3 0 0 2

This course covers building automation computer programming as currently used in energy management. Topics include night setback, duty cycling, synchronization, schedule optimization, and anticipatory temperature control. Upon completion, students should be able to write programs utilizing the above topics and connect computer systems to HVAC systems.

**Prerequisites**  
Take One: AHR-125 or AHR-215

**ALT – Alternative Energy Technology**

**ALT 120 – Renewable Energy Technologies** 2 2 0 0 3

This course provides an introduction to multiple technologies that allow for the production and conservation of energy from renewable sources. Topics include hydro-electric, wind power, passive and active solar energy, tidal energy, appropriate building techniques, and energy conservation methods. Upon completion, students should be able to demonstrate an understanding of renewable energy production and its impact on humans and their environment.

**ANT – Anthropology**

**ANT 210 – General Anthropology** 3 0 0 0 3

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.

**ANT 220 – Cultural Anthropology** 3 0 0 0 3

This course introduces the nature of human culture. Emphasis is placed on cultural theory, methods of fieldwork, and cross-cultural comparisons in the areas of ethnology, language, and the cultural past. Upon completion, students should be able to demonstrate an understanding of basic cultural processes and how cultural data are collected and analyzed.

**ANT 221 – Comparative Cultures** 3 0 0 0 3

This course provides an ethnographic survey of societies around the world covering their distinctive cultural characteristics and how these relate to cultural change. Emphasis is placed on the similarities and differences in social institutions such as family, economics, politics, education, and religion. Upon completion, students should be able to demonstrate knowledge of a variety of cultural adaptive strategies.

**ANT 230 – Physical Anthropology** 3 0 0 0 3

This course introduces the scientific study of human evolution and adaptation. Emphasis is placed on evolutionary theory, population genetics, biocultural adaptation and human variation, as well as non-human primate evolution, morphology, and behavior. Upon completion, students should be able to demonstrate an understanding of the biological and cultural processes which have resulted in the formation of the human species.

**ANT 230A – Physical Anthropology Lab** 0 2 0 0 1

This course provides laboratory work that reinforces the material presented in ANT 230. Emphasis is placed on laboratory exercises which may include fossil identification, genetic analysis, skeletal comparisons, forensics, computer simulations, and field observations. Upon completion, students should be able to demonstrate an understanding of the analytical skills employed by anthropologists in the study of primate evolution and variation.

**Corequisites**

ANT-230

**ANT 240 – Archaeology** 3 0 0 0 3

This course introduces the scientific study of the unwritten record of the human past. Emphasis is placed on the process of human cultural evolution as revealed through archaeological methods of excavation and interpretation. Upon completion, students should be able to demonstrate an understanding of how archaeologists reconstruct the past and describe the variety of past human cultures.

**ANT 240A – Archaeology Field Lab** 0 4 0 0 2

This course provides practical applications of archaeological methods. Emphasis is placed on basic archaeological methods and techniques required in site surveys, site classification, excavation, recording, processing, presentation, chronometry, and analysis of materials. Upon completion, students should be able to participate in applying archaeological methods and techniques to the excavation of a specific site.

**Corequisites**

ANT-240

**ANT 245 – World Prehistory** 3 0 0 0 3

This course provides an introduction to the prehistory of the Old and New world. Emphasis is placed on archaeological evidence from origins of human culture to the beginning of recorded history. Upon completion, students should be able to demonstrate knowledge of the variability of ancient human societies and the development of agriculture and urbanism.

**ARC – Architecture**

**ARC 114 – Architectural CAD** 1 3 0 0 2

This course introduces basic architectural CAD techniques. Topics include basic commands and system hardware and software. Upon completion, students should be able to prepare and plot architectural drawings to scale within accepted architectural standards.

**ARC 114A – Architectural CAD Lab** 0 3 0 0 1

This course provides a laboratory setting to enhance architectural CAD skills. Emphasis is placed on further development of commands and system operation. Upon completion, students should be able to prepare and plot scaled architectural drawings.

**Corequisites**

ARC-114

**ARC 221 – Architectural 3-D CAD** 1 4 0 0 3

This course introduces architectural three-dimensional CAD applications. Topics include three-dimensional drawing, coordinate systems, viewing, rendering, modeling, and output options. Upon completion, students should be able to prepare architectural three-dimensional drawings and renderings.

**Prerequisites**

Take ARC-114

**ARC 225 – Architectural Building Info Model I** 1 3 0 0 2

This course is an introduction to the fundamentals of Building Information Modeling (BIM) as a construction documentation system. Topics include basic parametric modeling, creating new types and families of components, and using 3D models to create design drawings. Upon completion, students should be able to use BIM software to create, edit, and print rudimentary architectural 3D computer models.

**ARC 225A – Architectural Building Info Model I Lab** 0 3 0 0 1

This course provides a laboratory setting to enhance architectural BIM skills. Emphasis is placed on further development of basic parametric modeling, creating new types and families of components. Upon completion, students should be able to use BIM software to create, edit, and print rudimentary architectural 3D computer models.

**Corequisites**

ARC-225

**ARC 226 – Architectural Building Info Model II** 1 3 0 0 2

This course covers advanced concepts of Building Information Modeling (BIM) including complex drawing generation and inter-disciplinary collaboration. Topics include advanced parametric modeling and model analysis, inter-disciplinary coordination, design web format models, material take-off, schedules, and rendering. Upon completion, students should be able to apply BIM software to create full 3D project models and convert them to scaled working or presentation drawings.

**Prerequisites**

Take ARC-225

**ARC 226A – Architectural Building Info Model II Lab** 0 3 0 0 1

This course provides a laboratory setting to enhance advanced architectural BIM skills. Emphasis is placed on further development of advanced parametric modeling and model analysis, inter-disciplinary coordination, design web format models, material take-off, schedules, and rendering. Upon completion, students should be able to apply BIM software to create full 3D project models and convert them to scaled working or presentation drawings.

**Corequisites**

ARC-226

**Prerequisites**

Take ARC-225

## ART – Art

**ART 111 – Art Appreciation** 3 0 0 0 3

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 is a Universal General Education Transfer Component course that is guaranteed to transfer for general education equivalency credit to each of the 16 institutions in the University of North Carolina system.

**ART 114 – Art History Survey I** 3 0 0 0 3

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 is a Universal General Education Transfer Component course that is guaranteed to transfer for general education equivalency credit to each of the 16 institutions in the University of North Carolina system.

**ART 115 – Art History Survey II** 3 0 0 0 3

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 is a Universal General Education Transfer Component course that is guaranteed to transfer for general education equivalency credit to each of the 16 institutions in the University of North Carolina system.

**ART 116 – Survey of American Art** 3 0 0 0 3

This course covers the development of American art forms from colonial times to the present. Emphasis is placed on architecture, painting, sculpture, graphics, and the decorative arts. Upon completion, students should be able to demonstrate understanding of the history of the American creative experience.

**ART 117 – Non-Western Art History** 3 0 0 0 3

This course introduces non-Western cultural perspectives. Emphasis is placed on, but not limited to, African, Oriental, and Oceanic art forms throughout history. Upon completion, students should be able to demonstrate an historical understanding of art as a product reflective of non-Western social and cultural development.

**ART 118 – Art by Women** 3 0 0 0 3

This course provides an analytical study of the works of representative female artists. Emphasis is placed on the historical and cultural contexts, themes, and aesthetic features of individual works. Upon completion, students should be able to interpret, analyze, and discuss selected works.

**ART 121 – Two-Dimensional Design** 0 6 0 0 3

This course introduces the elements and principles of design as applied to two-dimensional art. Emphasis is placed on the structural elements, the principles of visual organization, and the theories of color mixing and interaction. Upon completion, students should be able to understand and use critical and analytical approaches as they apply to two-dimensional visual art.

**ART 122 – Three-Dimensional Design** 0 6 0 0 3

This course introduces basic studio problems in three-dimensional visual design. Emphasis is placed on the structural elements and organizational principles as applied to mass and space. Upon completion, students should be able to apply three-dimensional design concepts.

**ART 131 – Drawing I** 0 6 0 0 3

This course introduces the language of drawing and the use of various drawing materials. Emphasis is placed on drawing techniques, media, and graphic principles. Upon completion, students should be able to demonstrate competence in the use of graphic form and various drawing processes.

**ART 132 – Drawing II** 0 6 0 0 3

This course continues instruction in the language of drawing and the use of various materials. Emphasis is placed on experimentation in the use of drawing techniques, media, and graphic materials. Upon completion, students should be able to demonstrate increased competence in the expressive use of graphic form and techniques.

**Prerequisites**

Take ART-131

**ART 135 – Figure Drawing I** 0 6 0 0 3

This course introduces rendering the human figure with various drawing materials. Emphasis is placed on the use of the visual elements, anatomy, and proportion in the representation of the draped and undraped figure. Upon completion, students should be able to demonstrate competence in drawing the human figure.

**Prerequisites**

Take ART-131

**ART 171 – Computer Art I** 0 6 0 0 3

This course introduces the use of the computer as a tool for solving visual problems. Emphasis is placed on fundamentals of computer literacy and design through bit-mapped image manipulation. Upon completion, students should be able to demonstrate an understanding of paint programs, printers, and scanners to capture, manipulate, and output images.

**ART 212 – Gallery Assistantship I** 0 2 0 0 1

This course covers the practical application of display techniques. Emphasis is placed on preparation of artwork for installation, hardware systems, and exhibition graphics. Upon completion, students should be able to demonstrate basic gallery exhibition skills.

**ART 214 – Portfolio and Resume** 0 2 0 0 1

This course covers resume writing, interview skills, and the preparation and presentation of an art portfolio. Emphasis is placed on the preparation of a portfolio of original artwork, the preparation of a photographic portfolio, approaches to resume writing, and interview techniques. Upon completion, students should be able to mount original art for portfolio presentation, photograph and display a professional slide portfolio, and write an effective resume.

**ART 231 – Printmaking I** 0 6 0 0 3

This course introduces printmaking: its history, development techniques, and processes. Emphasis is placed on basic applications with investigation into image source and development. Upon completion, students should be able to produce printed images utilizing a variety of methods.

**ART 235 – Figure Drawing II** 0 6 0 0 3

This course extends the study and rendering of the draped and undraped human figure. Emphasis is placed on the exploration of materials and approaches to drawing. Upon completion, students should be able to demonstrate creativity in the representation of the figure.

**Prerequisites**

Take ART-135

**ART 240 – Painting I** 0 6 0 0 3

This course introduces the language of painting and the use of various painting materials. Emphasis is placed on the understanding and use of various painting techniques, media, and color principles. Upon completion, students should be able to demonstrate competence in the use of creative processes directed toward the development of expressive form.

**ART 241 – Painting II** 0 6 0 0 3

This course provides a continuing investigation of the materials, processes, and techniques of painting. Emphasis is placed on the exploration of expressive content using a variety of creative processes. Upon completion, students should be able to demonstrate competence in the expanded use of form and variety.

**Prerequisites**

Take ART-240

**ART 244 – Watercolor** 0 6 0 0 3

This course introduces basic methods and techniques used in watercolor. Emphasis is placed on application, materials, content, and individual expression. Upon completion, students should be able to demonstrate a variety of traditional and nontraditional concepts used in watercolor media.

**ART 250 – Surface Design: Textiles** 0 6 0 0 3

This course introduces the basic principles and elements of art as applied to textile surfaces. Emphasis is placed on direct, top-dyed processes that utilize both synthetic and natural dyes, and techniques such as batik, stenciling, and stamping. Upon completion, students should be able to demonstrate a basic understanding of appropriate materials and techniques as they apply to original design on a variety of textile surfaces.

**ART 261 – Photography I** 0 6 0 0 3

This course introduces photographic equipment, theory, and processes. Emphasis is placed on camera operation, composition, darkroom technique, and creative expression. Upon completion, students should be able to successfully expose, develop, and print a well-conceived composition.

**ART 262 – Photography II** 0 6 0 0 3

This course introduces the creative manipulation of alternative photographic materials and processes such as toning, hand coloring, infrared, and multiple exposure. Emphasis is placed on personal vision and modes of seeing. Upon completion, students should be able to create properly exposed images using a variety of photographic materials and processes.

**Prerequisites**

Take ART-261

**ART 264 – Digital Photography I** 1 4 0 0 3

This course introduces digital photographic equipment, theory and processes. Emphasis is placed on camera operation, composition, computer photo manipulation and creative expression. Upon completion, students should be able to successfully expose, digitally manipulate, and print a well-conceived composition.

**ART 265 – Digital Photography II** 1 4 0 0 3

This course provides exploration of the concepts and processes of photo manipulation through complex composite images, special effects, color balancing and image/text integration. Emphasis is placed on creating a personal vision and style. Upon completion, students should be able to produce well-executed images using a variety of photographic and photo manipulative approaches.

**Prerequisites**

Take ART-264

**ART 266 – Videography I** 0 6 0 0 3

This course introduces various aspects of basic video production including concept development, scripting, camera operation, and post-production. Emphasis is placed on creative expression, camera handling, story boarding, and editing. Upon completion, students should be able to demonstrate a basic understanding of video camera operation and production techniques.

**ART 267 – Videography II** 0 6 0 0 3

This course is designed to provide a framework for the production of a long-term video project. Emphasis is placed on realization of the unique creative vision. Upon completion, students should be able to produce a thematically coherent, edited video with sound and titling.

**Prerequisites**

Take ART-266

**ART 281 – Sculpture I** 0 6 0 0 3

This course provides an exploration of the creative and technical methods of sculpture with focus on the traditional processes. Emphasis is placed on developing basic skills as they pertain to three-dimensional expression in various media. Upon completion, students should be able to show competence in variety of sculptural approaches.

**ART 282 – Sculpture II** 0 6 0 0 3

This course builds on the visual and technical skills learned in ART 281. Emphasis is placed on developing original solutions to sculptural problems in a variety of media. Upon completion, students should be able to express individual ideas using the techniques and materials of sculpture.

**Prerequisites**

Take ART-281

**ART 283 – Ceramics I** 0 6 0 0 3

This course provides an introduction to three-dimensional design principles using the medium of clay. Emphasis is placed on fundamentals of forming, surface design, glaze application, and firing. Upon completion, students should be able to demonstrate skills in slab and coil construction, simple wheel forms, glaze technique, and creative expression.

**ART 284 – Ceramics II** 0 6 0 0 3

This course covers advanced hand building and wheel techniques. Emphasis is placed on creative expression, surface design, sculptural quality, and glaze effect. Upon completion, students should be able to demonstrate a high level of technical competence in forming and glazing with a development of three-dimensional awareness.

**Prerequisites**

Take ART-283

**ART 288 – Studio** 0 6 0 0 3

This course provides the opportunity for advanced self-determined work beyond the limits of regular studio course sequences. Emphasis is placed on creative self-expression and in-depth exploration of techniques and materials. Upon completion, students should be able to create original projects specific to media, materials, and techniques.

**AST – Astronomy**

**AST 111 – Descriptive Astronomy** 3 0 0 0 3

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 is a Universal General Education Transfer Component course that is guaranteed to transfer for general education equivalency credit to each of the 16 institutions in the University of North Carolina system.

**AST 111A – Descriptive Astronomy Lab** 0 2 0 0 1

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 is a Universal General Education Transfer Component course that is guaranteed to transfer for general education equivalency credit to each of the 16 institutions in the University of North Carolina system.

**Corequisites**

AST-111

**AST 151 – General Astronomy I** 3 0 0 0 3

This course introduces the science of modern astronomy with a concentration on the solar system. Emphasis is placed on the history and physics of astronomy and an introduction to the solar system, including the planets, comets, and meteors. Upon completion, students should be able to demonstrate a general understanding of the solar system.

This course is a Universal General Education Transfer Component course that is guaranteed to transfer for general education equivalency credit to each of the 16 institutions in the University of North Carolina system.

**Prerequisites**

Take 1 group; # Take MAT-070; # Take DMA-010 DMA-020 DMA-030 DMA-040 DMA-050 DMA-060;

**AST 151A – General Astronomy I Lab** 0 2 0 0 1

The course is a laboratory to accompany AST 151. Emphasis is placed on laboratory experiences which enhance the materials presented in AST 151 and which provide practical experience. Upon completion, students should be able to demonstrate a general understanding of the solar system.

This course is a Universal General Education Transfer Component course that is guaranteed to transfer for general education equivalency credit to each of the 16 institutions in the University of North Carolina system.

**Corequisites**

AST-151

**AST 152 – General Astronomy II** 3 0 0 0 3

This course is a continuation of AST 151 with primary emphasis beyond the solar system. Topics include the sun, stars, galaxies, and the larger universe, including cosmology. Upon completion, students should be able to demonstrate a working knowledge of astronomy.

**Prerequisites**

Take AST-151

**AST 152A – General Astronomy II Lab** 0 2 0 0 1

The course is a laboratory to accompany AST 152. Emphasis is placed on laboratory experiences which enhance the materials presented in AST 152 and which provide practical experience. Upon completion, students should be able to demonstrate a working knowledge of astronomy.

**Corequisites**

AST-152

**Prerequisites**

Take AST-151; Take AST-151A;

**AST 251 – Observational Astronomy** 1 3 0 0 2

This course covers the operation of the telescope and related observatory equipment. Emphasis is placed on the use of the telescope and related observatory equipment, including techniques of data collection, measurements, and data analysis. Upon completion, students should be able to set up a telescope and use the coordinate system to locate objects, collect data, and make measurements with the telescope.

**Prerequisites**

Take AST-111 or AST-152; Take AST-152A;

**AUB – Automotive Body Repair**

**AUB 111 – Painting and Refinishing I** 2 6 0 0 4

This course introduces the proper procedures for using automotive refinishing equipment and materials in surface preparation and application. Topics include federal, state, and local regulations, personal safety, refinishing equipment and materials, surface preparation, masking, application techniques, and other related topics. Upon completion, students should be able to identify and use proper equipment and materials in refinishing following accepted industry standards.

**AUB 121 – Non-Structural Damage I** 1 4 0 0 3

This course introduces safety, tools, and the basic fundamentals of body repair. Topics include shop safety, damage analysis, tools and equipment, repair techniques, materials selection, materials usage, and other related topics. Upon completion, students should be able to identify and repair minor direct and indirect damage including removal/repairing/replacing of body panels to accepted standards.

**AUB 131 – Structural Damage I** 2 4 0 0 4

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.

**AUT – Automotive**

**AUT 113 – Automotive Servicing I** 0 6 0 0 2

This course is a lab used as an alternative to co-op placement. Emphasis is placed on shop operations, troubleshooting, testing, adjusting, repairing, and replacing components using appropriate test equipment and service information. Upon completion, students should be able to perform a variety of automotive repairs using proper service procedures and to operate appropriate equipment.

**Prerequisites**

Take AUT-181, AUT-183, AUT-141, AUT-151, AUT-163

**AUT 116 – Engine Repair** 2 3 0 0 3

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.

**Corequisites**

AUT-116A

**AUT 116A – Engine Repair Lab** 0 3 0 0 1

This course is an optional lab to be used as an alternative to co-op placement in meeting the NATEF standards for total hours. Topics include diagnosis, inspection, adjustment, and repair of automotive engines using appropriate service information. Upon completion, students should be able to perform basic diagnosis, measurement and repair of automotive engines using appropriate tools, equipment, procedures, and service information.

**Corequisites**

AUT-116

**AUT 141 – Suspension and Steering Systems** 2 3 0 0 3

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.

**Corequisites**

AUT-141A

**AUT 141A – Suspension and Steering Lab** 0 3 0 0 1

This course is an optional lab to be used as an alternative to co-op placement in meeting the NATEF standards for total hours. Topics include manual and power steering systems and standard and electronically controlled suspension and steering systems. Upon completion, students should be able to service and repair steering and suspension components, check and adjust alignment angles, repair tires, and balance wheels.

**Corequisites**

AUT-141

**AUT 151 – Brake Systems** 2 3 0 0 3

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.

**Corequisites**

AUT-151A

**AUT 151A – Brakes Systems Lab** 0 3 0 0 1

This course is an optional lab to be used as an alternative to co-op placement in meeting the NATEF standards for total hours. Topics include drum and disc brakes involving hydraulic, vacuum-boost, hydra-boost, electrically powered boost, and anti-lock, parking brake systems and emerging brake systems technologies. Upon completion, students should be able to diagnose, service, and repair various automotive braking systems.

**Corequisites**

AUT-151

**AUT 163 – Advanced Automotive Electricity** 2 3 0 0 3

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.

**Corequisites**

AUT-163A

**Prerequisites**

Take TRN-120

**AUT 163A – Adv Automotive Electricity Lab** 0 3 0 0 1

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.

**Corequisites**

AUT-163

**AUT 181 – Engine Performance 1** 2 3 0 0 3

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.

**Corequisites**

AUT-181A

**Prerequisites**

Take TRN-120;

**AUT 181A – Engine Performance 1 Lab** 0 3 0 0 1

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.

**Corequisites**

AUT-181

**AUT 183 – Engine Performance 2** 2 6 0 0 4

This course covers study of the electronic engine control systems, the diagnostic process used to locate engine performance concerns, and procedures used to restore normal operation. Topics will include currently used fuels and fuel systems, exhaust gas analysis, emission control components and systems, OBD II (on-board diagnostics) and inter-related electrical/electronic systems. Upon completion, students should be able to diagnose and repair complex engine performance concerns using appropriate test equipment and service information.

**Prerequisites**

Take AUT-181

**AUT 221 – Automatic Transmissions/Transaxles** 2 3 0 0 3

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.

- Corequisites**
- AUT-221A
- Prerequisites**
- Take TRN-120;

**AUT 221A – Automatic Transmissions/Transaxles Lab** 0 3 0 0 1

This course is an optional lab to be used as an alternative to co-op placement in meeting the NATEF standards for total hours. Topics include hydraulic, pneumatic, mechanical, and electrical/electronic operation of automatic drive trains and the use of appropriate service tools and equipment. Upon completion, students should be able to diagnose and repair automatic drive trains.

- Corequisites**
- AUT-221

**AUT 231 – Manual Transmissions/Transaxles/Drive Trains** 2 3 0 0 3

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.

- Corequisites**
- AUT-231A
- Prerequisites**
- Take TRN-120;

**AUT 231A – Manual Transmissions/Transaxles/Drive Trains Lab** 0 3 0 0 1

This course is an optional lab for the program that needs to meet NATEF hour standards but does not have a co-op component in the program. Topics include manual drive train diagnosis, service and repair using appropriate service information, tools, and equipment. Upon completion, students should be able to diagnose and repair manual drive trains.

- Corequisites**
- AUT-231

## BIO – Biology

**BIO 106 – Intro to Anatomy/Physiology/Microbiology** 2 2 0 0 3

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.

**BIO 110 – Principles of Biology** 3 3 0 0 4

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.

This course is a Universal General Education Transfer Component course that is guaranteed to transfer for general education equivalency credit to each of the 16 institutions in the University of North Carolina system.

**BIO 111 – General Biology I** 3 3 0 0 4

This course introduces the principles and concepts of biology. Emphasis is placed on basic biological chemistry, molecular and cellular biology, metabolism and energy transformation, genetics, evolution, and other related topics. Upon completion, students should be able to demonstrate understanding of life at the molecular and cellular levels.

This course is a Universal General Education Transfer Component course that is guaranteed to transfer for general education equivalency credit to each of the 16 institutions in the University of North Carolina system.

- Prerequisites**
- Take RED-090, ENG-111, ENG-095 or DRE-097

**BIO 112 – General Biology II** 3 3 0 0 4

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.

This course is a Universal General Education Transfer Component course that is guaranteed to transfer for general education equivalency credit to each of the 16 institutions in the University of North Carolina system.

- Prerequisites**
- Take BIO-111

**BIO 140 – Environmental Biology** 3 0 0 0 3

This course introduces environmental processes and the influence of human activities upon them. Topics include ecological concepts, population growth, natural resources, and a focus on current environmental problems from scientific, social, political, and economic perspectives. Upon completion, students should be able to demonstrate an understanding of environmental interrelationships and of contemporary environmental issues.

**BIO 140A – Environmental Biology Lab** 0 3 0 0 1

This course provides a laboratory component to complement BIO 140. Emphasis is placed on laboratory and field experience. Upon completion, students should be able to demonstrate a practical understanding of environmental interrelationships and of contemporary environmental issues.

**Corequisites**

BIO-140

**BIO 163 – Basic Anatomy and Physiology** 4 2 0 0 5

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.

**Prerequisites**

Take 3 credits; From courses RED-090 ENG-111 ENG-095 DRE-097;

**BIO 168 – Anatomy and Physiology I** 3 3 0 0 4

This course provides a comprehensive study of the anatomy and physiology of the human body. Topics include body organization, homeostasis, cytology, histology, and the integumentary, skeletal, muscular, and nervous systems and special senses. Upon completion, students should be able to demonstrate an in-depth understanding of principles of anatomy and physiology and their interrelationships.

**Prerequisites**

Take 3 credits; From courses RED-090 ENG-111 ENG-095 DRE-097;

**BIO 169 – Anatomy and Physiology II** 3 3 0 0 4

This course provides a continuation of the comprehensive study of the anatomy and physiology of the human body. Topics include the endocrine, cardiovascular, lymphatic, respiratory, digestive, urinary, and reproductive systems as well as metabolism, nutrition, acid-base balance, and fluid and electrolyte balance. Upon completion, students should be able to demonstrate an in-depth understanding of principles of anatomy and physiology and their interrelationships.

**Prerequisites**

Take BIO-168(S11555); with a grade of "C" or better.

**BIO 250 – Genetics** 3 3 0 0 4

This course covers principles of prokaryotic and eukaryotic cell genetics. Emphasis is placed on the molecular basis of heredity, chromosome structure, patterns of Mendelian and non-Mendelian inheritance, evolution, and biotechnological applications. Upon completion, students should be able to recognize and describe genetic phenomena and demonstrate knowledge of important genetic principles.

**Prerequisites**

Take BIO-112

**BIO 275 – Microbiology** 3 3 0 0 4

This course covers principles of microbiology and the impact these organisms have on man and the environment. Topics include the various groups of microorganisms, their structure, physiology, genetics, microbial pathogenicity, infectious diseases, immunology, and selected practical applications. Upon completion, students should be able to demonstrate knowledge and skills including microscopy, aseptic technique, staining, culture methods, and identification of microorganisms.

**Prerequisites**

Take One: BIO 110, BIO 111, BIO 163, BIO 165, or BIO 168

**BIO 280 – Biotechnology** 2 3 0 0 3

This course provides experience in selected laboratory procedures. Topics include proper laboratory techniques in biology and chemistry. Upon completion, students should be able to identify laboratory techniques and instrumentation in basic biotechnology.

**Prerequisites**

Take One: BIO-111, CHM-131, or CHM-151

## BPR – Blueprint Reading

### BPR 111 – Print Reading 1 2 0 0 2

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.

### BPR 121 – Blueprint Reading-Mechanical 1 2 0 0 2

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.

#### Prerequisites

Take One: BPR-111 or MAC-131

### BPR 130 – Print Reading-Construction 3 0 0 0 3

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.

### BPR 230 – Commercial Blueprints 1 2 0 0 2

This course covers blueprints specific to commercial structures and requires basic blueprint reading skills and/or a commercial construction background. Topics include site, structural, mechanical, electrical, and plumbing blueprints and specifications. Upon completion, students should be able to interpret commercial blueprints and specifications.

#### Prerequisites

Take BPR-130

## BTC – Biotechnology

### BTC 181 – Basic Laboratory Techniques 3 3 0 0 4

This course introduces the basic skills and knowledge necessary in a biological or chemical laboratory. Emphasis is placed on good manufacturing practices, safety, sustainable lab practices, solution preparation, and equipment operation and maintenance following standard operating procedures. Upon completion, students should be able to prepare and perform basic laboratory procedures using labware, solutions, and equipment according to prescribed protocols.

#### Prerequisites

Take 1 group; # Take MAT-070; # Take DMA-010 DMA-020 DMA-030 DMA-040 DMA-050;

### BTC 270 – Recombinant DNA Technology 3 3 0 0 4

This course covers basic methods in biotechnology for the manipulation of nucleic acids. Emphasis is placed on topics concerning techniques used in recombinant DNA technology, including PCR, restriction digests, mapping, cloning, and forensics. Upon completion, students should be able to demonstrate an understanding of the theory, practice, and application of recombinant DNA techniques.

#### Prerequisites

Take One Set:

Set 1: BTC-181 and BTC-250

Set 2: BTC-181 and BIO-250

### BTC 281 – Bioprocess Techniques 2 6 0 0 4

This course covers processes used in the production of biomolecules. Emphasis is placed on the production, characterization, and purification of biological products using fermentation, centrifugation, filtration, electrophoresis, and other techniques used in industry. Upon completion, students should be able to produce biological products using the various methods of bioprocessing.

#### Prerequisites

Take BTC-181

### BTC 282 – Biotechnology Fermentation I 2 6 0 0 4

This course provides an introduction to fermentor classification and configuration for small-scale laboratory processes utilizing prokaryotic organisms to demonstrate techniques used in fermentation procedures. Topics include batch process records, fermentor design, fermentation theory, and medium formulation, as well as techniques used for cell harvesting, cell disruption and fractionation methods. Upon completion, students should be able to set up a fermentor; grow prokaryotic cells; and isolate and collect various fractions derived from fermentation.

#### Prerequisites

Take BTC-181

### BTC 283 – Biotechnology Fermentation II 2 6 0 0 4

This course introduces techniques for recovery of fermentation products to include removal of insolubles, product isolation, high resolutions techniques and product polishing using eukaryotic cells. Topics include filter design, separation processes such as flocculation, coagulation, distillation, liquid-liquid extraction, different types of chromatography and emerging technologies for product recovery. Upon completion, students should be able to perform eukaryotic cell cultivation and various separation techniques used in small-scale fermentation with an understanding of scale-up procedures.

#### Prerequisites

Take BTC-282

**BTC 285 – Cell Culture** 2 3 0 0 3

This course introduces the theory and practices required to successfully initiate and maintain plant and animal cell cultures. Topics include aseptic techniques, the growth environment, routine maintenance of cell cultures, specialized culture techniques, and various applications. Upon completion, students should be able to demonstrate the knowledge and skills required to grow, maintain, and manipulate cells in culture.

**Prerequisites**

Take One: BIO-175 or BIO-275

**BTC 286 – Immunological Techniques** 3 3 0 0 4

This course covers the principles and practices of modern immunology, including the interactions between the various cellular and chemical components of the immune response. Topics include antigens, humoral immunity, cellular immunity, complement, immunological assays, and hybridoma use and production. Upon completion, students should be able to discuss the immune response, perform immunological assays, and make monoclonal antibody-producing hybridomas.

**Prerequisites**

Take BTC-285

**BTC 288 – Biotech Lab Experience** 0 6 0 0 2

This course provides an opportunity to pursue an individual laboratory project in biotechnology. Emphasis is placed on developing, performing, and maintaining records of a project in a specific area of interest. Upon completion, students should be able to complete the project with accurate records and demonstrate an understanding of the process.

**Prerequisites**

Take One Set: Set 1: BIO-250 and BTC-281 Set 2: BIO-250 and BTC-285 Set 3: BIO-250 and BTC-286 Set 4: BTC-270 and BTC-281 Set 5: BTC-270 and BTC-285 Set 6: BTC-270 and BTC-286

**BUS – Business**

**BUS 110 – Introduction to Business** 3 0 0 0 3

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.

**BUS 115 – Business Law I** 3 0 0 0 3

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.

**BUS 121 – Business Math** 2 2 0 0 3

This course covers fundamental mathematical operations and their application to business problems. Topics include payroll, pricing, interest and discount, commission, taxes, and other pertinent uses of mathematics in the field of business. Upon completion, students should be able to apply mathematical concepts to business.

**Prerequisites**

Take 1 group; # Take MAT-060; # Take DMA-010 DMA-020 DMA-030 DMA-040;

**BUS 125 – Personal Finance** 3 0 0 0 3

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.

**BUS 137 – Principles of Management** 3 0 0 0 3

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.

**BUS 153 – Human Resource Management** 3 0 0 0 3

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.

**BUS 217 – Employment Law and Regulations** 3 0 0 0 3

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.

**BUS 225 – Business Finance** 2 2 0 0 3

This course provides an overview of business financial management. Emphasis is placed on financial statement analysis, time value of money, management of cash flow, risk and return, and sources of financing. Upon completion, students should be able to interpret and apply the principles of financial management.

**Prerequisites**

Take ACC-120

**BUS 230 – Small Business Management** 3 0 0 0 3

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.

**BUS 234 – Training and Development** 3 0 0 0 3

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.

**BUS 240 – Business Ethics** 3 0 0 0 3

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.

**BUS 253 – Leadership and Management Skills** 3 0 0 0 3

This course includes a study of the qualities, behaviors, and personal styles exhibited by leaders. Emphasis is placed on coaching, counseling, team building, and employee involvement. Upon completion, students should be able to identify and exhibit the behaviors needed for organizational effectiveness.

**BUS 256 – Recruiting, Selection, and Personnel Planning** 3 0 0 0 3

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.

**BUS 258 – Compensation and Benefits** 3 0 0 0 3

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.

**BUS 259 – HRM Applications** 3 0 0 0 3

This course provides students in the Human Resource Management concentration the opportunity to reinforce their learning experiences from preceding HRM courses. Emphasis is placed on application of day-to-day HRM functions by completing in-basket exercises and through simulations. Upon completion, students should be able to determine the appropriate actions called for by typical events that affect the status of people at work.

**Prerequisites**

Take All: BUS-217, BUS-234, BUS-256, and BUS-258.

**BUS 260 – Business Communication** 3 0 0 0 3

This course is designed to develop skills in writing business communications. Emphasis is placed on business reports, correspondence, and professional presentations. Upon completion, students should be able to communicate effectively in the work place.

**Prerequisites**

Take One: ENG-110 or ENG-111

**BUS 280 – REAL Small Business** 4 0 0 0 4

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.

## CAR – Carpentry

### CAR 110 – Introduction to Carpentry 2 0 0 0 2

This course introduces the student to the carpentry trade. Topics include duties of a carpenter, hand and power tools, building materials, construction methods, and safety. Upon completion, students should be able to identify hand and power tools, common building materials, and basic construction methods.

### CAR 111 – Carpentry I 3 15 0 0 8

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.

### CAR 112 – Carpentry II 3 15 0 0 8

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.

#### Prerequisites

Take CAR-111

### CAR 113 – Carpentry III 3 9 0 0 6

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.

#### Prerequisites

Take CAR-111

### CAR 120 – Commercial Carpentry I 2 12 0 0 6

This course introduces the theory and construction methods associated with general construction, including framing, materials, tools, and equipment. Topics include safety, hand/power tool use, blueprints, rigging, construction framing, windows, exterior doors, and other related topics. Upon completion, students should be able to safely demonstrate basic general carpentry skills with supervision.

### CAR 125 – Commercial Carpentry II 2 12 0 0 6

This course covers the advanced theory and construction methods associated with the building industry including concrete framing, reinforcing, and placement. Topics include safety, hand/power tool use, blueprints, concrete construction methods, light equipment operation, and other related topics. Upon completion, students should be able to safely demonstrate concrete construction skills with supervision.

#### Prerequisites

Take CAR-120

### CAR 135 – Commercial Carpentry IV 2 12 0 0 6

This course covers more advanced construction practices and procedures, as well as management concepts. Topics include safety, hand/power tool use, stairs, walls, floors, welding, metal building assembly, management and supervision, measurement and layout, and other related topics. Upon completion, students should be able to demonstrate skills in advanced construction procedures and processes with supervision.

#### Prerequisites

Take CAR-120

### CAR 140 – Basic Carpentry 2 6 0 0 4

This course covers the basic construction of wood structures, and installation, maintenance, and repair of the many components within these structures. Topics include safe use of tools, implementation of standard practices, appropriate use of materials, and installation/repair of components such as doors, windows, roofing, and siding. Upon completion, students should be able to construct, install/repair wooden structures and components using appropriate tools, materials and standard practices from the carpentry trade.

### CAR 150 – Concrete Construction 2 9 0 0 5

This course covers methods of erecting forms and placing concrete. Topics include safety, hand/power tool use, blueprints, rigging, form construction, reinforcement, and placement. Upon completion, students should be able to demonstrate skills in concrete construction procedures and processes with supervision.

## CCT – Cyber Crime Technology

### CCT 110 – Introduction to Cyber Crime 3 0 0 0 3

This course introduces and explains the various types of offenses that qualify as cyber crime activity. Emphasis is placed on identifying cyber crime activity and the response to these problems from both the private and public domains. Upon completion, students should be able to accurately describe and define cyber crime activities and select an appropriate response to deal with the problem.

### CCT 112 – Ethics and High Technology 3 0 0 0 3

This course covers ethical considerations and accepted standard practices applicable to technological investigations and computer privacy issues relative to the cyber crime investigator. Topics include illegal and unethical investigative activities, end-justifying-the-means issues, and privacy issues of massive personal database information gathered by governmental sources. Upon completion, students should be able to examine their own value systems and apply ethical considerations in identifiable cyber crime investigations.

### CCT 121 – Computer Crime Investigation 3 2 0 0 4

This course introduces the fundamental principles of computer crime investigation processes. Topics include crime scene/incident processing, information gathering techniques, data retrieval, collection and preservation of evidence, preparation of reports and court presentations. Upon completion, students should be able to identify cyber crime activity and demonstrate proper investigative techniques to process the scene and assist in case prosecution.

### CCT 220 – Forensic Accounting 3 3 0 0 4

This course introduces the basic principles and procedures of investigative accounting and analysis of financial evidence. Emphasis is placed on collecting data and evidence, evaluation of internal control systems, accounting systems, concealed income analysis and fraud detection. Upon completion, students should be able to apply generally accepted accounting standards and procedures for conducting a criminal investigation audit for financial information.

### CCT 231 – Technology Crimes and Law 3 0 0 0 3

This course covers the applicable technological laws dealing with the regulation of cyber security and criminal activity. Topics include an examination of state, federal and international laws regarding cyber crime with an emphasis on both general and North Carolina statutes. Upon completion, students should be able to identify the elements of cyber crime activity and discuss the trends of evolving laws.

### CCT 240 – Data Recovery Techniques 2 3 0 0 3

This course introduces the unique skills and methodologies necessary to assist in the investigation and prosecution of cyber crimes. Topics include hardware and software issues, recovering erased files, overcoming encryption, advanced imaging, transient data, Internet issues and testimony considerations. Upon completion, students should be able to recover digital evidence, extract information for criminal investigation and legally seize criminal evidence.

### CCT 241 – Advanced Data Recovery 2 3 0 0 3

This course further explores the methodologies necessary to assist in the investigation and analysis of cyber crimes. Topics include commercial and open-source software tools for working with evidence acquisition, data recovery, and encryption. Upon completion, students should be able to perform the data recovery and analysis for a complete criminal or corporate investigation.

#### Prerequisites

Take CCT-240

### CCT 250 – Network Vulnerabilities I 2 2 0 0 3

This course introduces students to penetration testing, network vulnerabilities, and hacking. Topics include an overview of traditional network security, system hardening, and known weaknesses. Upon completion, students should be able to evaluate weaknesses of traditional and wireless network for the purpose of incident response, reconstruction, and forensic investigation.

#### Prerequisites

Take One: CTI-120 or NET-110

## CEG – Civil Engineering and Geomatics

### CEG 210 – Construction Materials and Methods 2 3 0 0 3

This course covers the behavior and properties of Portland cement, asphaltic concretes, and other construction materials, including construction methods and equipment. Topics include cementing agents, aggregates, water and admixture materials with their proportions, production, placement, consolidation, curing; and their inspection. Upon completion, students should be able to proportion Portland concrete mixes to attain predetermined strengths, perform standard control tests on Portland cement concrete, identify inspection criteria for concretes, identify construction equipment and applications.

## CHM – Chemistry

### CHM 121 – Foundations of Chemistry 3 0 0 0 3

This course is designed for those who have no previous high school chemistry or a grade of C or less in high school chemistry. Topics include matter, structure of the atom, nomenclature, chemical equations, bonding and reactions; mathematical topics include measurements, scientific notation, and stoichiometry. Upon completion, students should be able to demonstrate an understanding of chemical concepts and an ability to solve related problems in subsequent chemistry courses.

#### Prerequisites

Take 1 group; #Take MAT-070 RED-090 #Take MAT-070 ENG-111 #Take MAT-070 ENG-095 #Take MAT-070 DRE-098 #Take DMA-010 DMA-020 DMA-030 DMA-040 DMA-050 RED-090 #Take DMA-010 DMA-020 DMA-030 DMA-040 DMA-050 ENG-111 #Take DMA-010 DMA-020 DMA-030 DMA-040 DMA-050 ENG 095 #Take DMA-010 DMA-020 DMA-030 DMA-040 DMA-050 DRE 098

### CHM 131 – Introduction to Chemistry 3 0 0 0 3

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.

#### Corequisites

CHM-131A

#### Prerequisites

Take 1 group; # Take MAT-070 RED-090; # Take MAT-070 ENG-111; # Take MAT-070 ENG-095; # Take MAT-070 DRE-098; # Take RED-090 DMA-010 DMA-020 DMA-030 DMA-040 DMA-050 DMA-060; # Take ENG-111 DMA-010 DMA-020 DMA-030 DMA-040 DMA-050 DMA-060; # Take ENG-095 DMA-010 DMA-020 DMA-030 DMA-040 DMA-050 DMA-060; # Take DRE-098 DMA-010 DMA-020 DMA-030 DMA-040 DMA-050 DMA-060

### CHM 131A – Introduction to Chemistry Lab 0 3 0 0 1

This course is a laboratory to accompany CHM 131. Emphasis is placed on laboratory experiences that enhance materials presented in CHM 131. Upon completion, students should be able to utilize basic laboratory procedures and apply them to chemical principles presented in CHM 131.

#### Corequisites

CHM-131

### CHM 132 – Organic and Biochemistry 3 3 0 0 4

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.

#### Prerequisites

Take one set: Set 1: CHM-131 and CHM-131A  
Set 2: CHM-151

### CHM 151 – General Chemistry I 3 3 0 0 4

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.

This course is a Universal General Education Transfer Component course that is guaranteed to transfer for general education equivalency credit to each of the 16 institutions in the University of North Carolina system. High school chemistry or equivalent with a grade of C or higher within the last five years is strongly recommended.

#### Corequisites

Take MAT-171.

#### Prerequisites

Take 2 groups; #Take DRE-098 or ENG-111; #Take DMA-010 DMA-020 DMA-030 DMA-040 DMA-050 DMA-060 DMA-070 DMA-080.

### CHM 152 – General Chemistry II 3 3 0 0 4

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.

This course is a Universal General Education Transfer Component course that is guaranteed to transfer for general education equivalency credit to each of the 16 institutions in the University of North Carolina system.

#### Prerequisites

Take CHM-151; with a grade of "C" or better.

**CHM 251 – Organic Chemistry I** 3 3 0 0 4

This course provides a systematic study of the theories, principles, and techniques of organic chemistry. Topics include nomenclature, structure, properties, reactions, and mechanisms of hydrocarbons, alkyl halides, alcohols, and ethers; further topics include isomerization, stereochemistry, and spectroscopy. Upon completion, students should be able to demonstrate an understanding of the fundamental concepts of covered organic topics as needed in CHM 252.

**Prerequisites**

Take CHM-152

**CHM 252 – Organic Chemistry II** 3 3 0 0 4

This course provides continuation of the systematic study of the theories, principles, and techniques of organic chemistry. Topics include nomenclature, structure, properties, reactions, and mechanisms of aromatics, aldehydes, ketones, carboxylic acids and derivatives, amines and heterocyclics; multi-step synthesis will be emphasized. Upon completion, students should be able to demonstrate an understanding of organic concepts as needed to pursue further study in chemistry and related professional fields.

**Prerequisites**

Take CHM-251

**CHM 263 – Analytical Chemistry** 3 4 0 0 5

This course covers the knowledge and laboratory skills needed to perform chemical analysis. Emphasis is placed on developing laboratory techniques used in the separation, identification, and quantification of selected substances. Upon completion, students should be able to perform laboratory techniques employed in substance identification and volumetric analysis and interpret the results.

**Prerequisites**

Take One: CHM-132 or CHM-152

**CIS – Information Systems****CIS 110 – Introduction to Computers** 2 2 0 0 3

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.

**Prerequisites**

Take 2 groups; # Take CTS-060 or CTS-080; # Take RED-090, ENG-111, ENG-095, or DRE-097;

**CIS 115 – Intro to Programming and Logic** 2 3 0 0 3

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 manage files with operating system commands, use top-down algorithm design, and implement algorithmic solutions in a programming language.

**Prerequisites**

Take all 3 groups. Group #1: Take DMA-010, DMA-020, DMA-030, and DMA-040, OR MAT-121, OR MAT-171.

Group#2: Take CTS-060 or CTS-080.

Group 3# Take DRE-097, ENG-111, RED-090, or ENG-095.

**CIV – Civil Engineering****CIV 111 – Soils and Foundations** 2 4 0 0 4

This course presents an overview of soil as a construction material using both analysis and testing procedures. Topics include index properties, classification, stress analysis, compressibility, compaction, dewatering, excavation, stabilization, settlement, and foundations. Upon completion, students should be able to perform basic soil tests and analyze engineering properties of soil.

**Prerequisites**

TAKE 1 COURSE; FROM EGR-250 EGR-251 MEC-210

**CIV 115 – Geotechnical Engineering** 2 6 0 0 4

This course introduces soil origin, classification, composition, and mechanics, for the purpose of determining strength and stability. Topics include analyzing and testing soil chemistry, taxonomy, permeability, compression, stress analysis, stabilization, and settlement. Upon completion, students should be able to demonstrate an understanding of soils, subsurface exploration techniques, science of earth materials, and fundamental concepts of particulate mechanics.

**Prerequisites**

Take EGR-250 EGR-251 or MEC-210

**CIV 222 – Reinforced Concrete** 2 3 0 0 3

This course introduces the basic elements of reinforced concrete structures. Topics include analysis and design of reinforced concrete beams, slabs, columns, footings, and retaining walls. Upon completion, students should be able to analyze and design components of a structure using reinforced concrete and draw simple plans using Computer Aided Drafting and Design software (CADD).

**Prerequisites**

Take EGR-250 EGR-251 or MEC-210

**CIV 230 – Construction Estimating** 2 3 0 0 3

This course covers quantity take-offs of labor, materials, and equipment and calculation of direct and overhead costs for a construction project. Topics include the interpretation of working drawings and specifications, types of contracts and estimates, building codes, bidding techniques and procedures, and estimating software. Upon completion, students should be able to prepare a detailed cost estimate and bid documents for a construction project.

**Prerequisites**

Take One: ARC-111, CIS-110, CIS-111, or EGR-115

**CIV 240 – Project Management** 2 3 0 0 3

This course introduces construction planning and scheduling techniques and project management software. Topics include construction safety, operation analysis, construction scheduling, construction control systems, claims and dispute resolutions, project records and documentation. Upon completion, students should be able to demonstrate an understanding of the roles of construction project participants, maintain construction records, and prepare construction schedules.

**CJC – Criminal Justice**

**CJC 100 – Basic Law Enforcement Training** 9 30 0 0 19

This course covers the basic skills and knowledge needed for entry-level employment as a law enforcement officer in North Carolina. Topics are divided into general units of study: legal, patrol duties, law enforcement communications, investigations, practical application and sheriff-specific. Upon successful completion, the student will be able to demonstrate competence in the topics and areas required for the state comprehensive certification examination.

**CJC 111 – Introduction to Criminal Justice** 3 0 0 0 3

This course introduces the components and processes of the criminal justice system. Topics include history, structure, functions, and philosophy of the criminal justice system and their relationship to life in our society. Upon completion, students should be able to define and describe the major system components and their interrelationships and evaluate career options.

**CJC 112 – Criminology** 3 0 0 0 3

This course introduces deviant behavior as it relates to criminal activity. Topics include theories of crime causation; statistical analysis of criminal behavior; past, present, and future social control initiatives; and other related topics. Upon completion, students should be able to explain and discuss various theories of crime causation and societal response.

**CJC 113 – Juvenile Justice** 3 0 0 0 3

This course covers the juvenile justice system and related juvenile issues. Topics include an overview of the juvenile justice system, treatment and prevention programs, special areas and laws unique to juveniles, and other related topics. Upon completion, students should be able to identify/discuss juvenile court structure/procedures, function and jurisdiction of juvenile agencies, processing/detention of juveniles, and case disposition.

**CJC 121 – Law Enforcement Operations** 3 0 0 0 3

This course introduces fundamental law enforcement operations. Topics include the contemporary evolution of law enforcement operations and related issues. Upon completion, students should be able to explain theories, practices, and issues related to law enforcement operations.

**CJC 131 – Criminal Law** 3 0 0 0 3

This course covers the history/evolution/principles and contemporary applications of criminal law. Topics include sources of substantive law, classification of crimes, parties to crime, elements of crimes, matters of criminal responsibility, and other related topics. Upon completion, students should be able to discuss the sources of law and identify, interpret, and apply the appropriate statutes/elements.

**CJC 132 – Court Procedure and Evidence** 3 0 0 0 3

This course covers judicial structure/process/procedure from incident to disposition, kinds and degrees of evidence, and the rules governing admissibility of evidence in court. Topics include consideration of state and federal courts, arrest, search and seizure laws, exclusionary and statutory rules of evidence, and other related issues. Upon completion, students should be able to identify and discuss procedures necessary to establish a lawful arrest/search, proper judicial procedures, and the admissibility of evidence.

**CJC 141 – Corrections** 3 0 0 0 3

This course covers the history, major philosophies, components, and current practices and problems of the field of corrections. Topics include historical evolution, functions of the various components, alternatives to incarceration, treatment programs, inmate control, and other related topics. Upon completion, students should be able to explain the various components, processes, and functions of the correctional system.

**CJC 160 – Terrorism: Underlying Issues** 3 0 0 0 3

This course identifies the fundamental reasons why America is a target for terrorists, covering various domestic/international terrorist groups and ideologies from a historical aspect. Emphasis is placed upon recognition of terrorist crime scene; weapons of mass destruction; chemical, biological, and nuclear terrorism; and planning considerations involving threat assessments. Upon completion, students should be able to identify and discuss the methods used in terrorists' activities and complete a threat assessment for terrorists' incidents.

**CJC 161 – Introduction to Homeland Security** 3 0 0 0 3

This course introduces the historical, organizational and practical aspects of Homeland Security. Topics include a historic overview, definitions and concepts, organizational structure, communications, technology, mitigation, prevention and preparedness, response and recovery, and the future of Homeland Security. Upon completion, students should be able to explain essential characteristics of terrorism and Homeland Security, and define roles, functions and interdependency between agencies.

**CJC 162 – Intelligence Analysis and Security Management** 3 0 0 0 3

This course examines intelligence analysis and its relationship to the security management of terrorist attacks and other threats to national security of the United States. Topics include a historic overview, definitions and concepts, intelligence evolution-politicization-operations-strategies, surveillance, analysis perspectives, covert action, and ethics. Upon completion, students should be able to outline intelligence policies, evaluate source information, implement intelligence techniques and analysis, identify threats, and apply ethical behaviors.

**CJC 163 – Transportation and Border Security** 3 0 0 0 3

This course provides an in-depth view of modern border and transportation security including the technologies used for detecting potential threats from terrorists and weapons. Topics include an overview of security challenges, detection devices and equipment, transportation systems, facilities, threats and counter-measures, and security procedures, policies and agencies. Upon completion, students should be able to describe border security, the technologies used to enforce it, and the considerations and strategies of border security agencies.

**CJC 170 – Critical Incident Mgmt for Public Safety** 3 0 0 0 3

This course prepares the student to specialize in the direct response, operations, and management of critical incidents. Emphasis is placed upon the theoretical and applied models to understand and manage disasters, terrorism, and school/work place violence. Upon completion, the student should be able to identify and discuss managerial techniques legal issues, and response procedures to critical incidents.

**CJC 212 – Ethics and Community Relations** 3 0 0 0 3

This course covers ethical considerations and accepted standards applicable to criminal justice organizations and professionals. Topics include ethical systems; social change, values, and norms; cultural diversity; citizen involvement in criminal justice issues; and other related topics. Upon completion, students should be able to apply ethical considerations to the decision-making process in identifiable criminal justice situations.

**CJC 214 – Victimology** 3 0 0 0 3

This course introduces the study of victims. Emphasis is placed on roles/characteristics of victims, victim interaction with the criminal justice system and society, current victim assistance programs, and other related topics. Upon completion, students should be able to discuss and identify victims, the uniqueness of victims' roles, and current victim assistance programs.

**CJC 221 – Investigative Principles** 3 2 0 0 4

This course introduces the theories and fundamentals of the investigative process. Topics include crime scene/incident processing, information gathering techniques, collection/preservation of evidence, preparation of appropriate reports, court presentations, and other related topics. Upon completion, students should be able to identify, explain, and demonstrate the techniques of the investigative process, report preparation, and courtroom presentation.

**CJC 223 – Organized Crime** 3 0 0 0 3

This course introduces the evolution of traditional and non-traditional organized crime and its effect on society and the criminal justice system. Topics include identifying individuals and groups involved in organized crime, areas of criminal activity, legal and political responses to organized crime, and other related topics. Upon completion, students should be able to identify the groups and activities involved in organized crime and the responses of the criminal justice system.

**CJC 231 – Constitutional Law** 3 0 0 0 3

The course covers the impact of the Constitution of the United States and its amendments on the criminal justice system. Topics include the structure of the Constitution and its amendments, court decisions pertinent to contemporary criminal justice issues, and other related topics. Upon completion, students should be able to identify/discuss the basic structure of the United States Constitution and the rights/procedures as interpreted by the courts.

**CJC 233 – Correctional Law** 3 0 0 0 3

This course introduces statutory/case law pertinent to correctional concepts, facilities, and related practices. Topics include examination of major legal issues encompassing incarceration, probation, parole, restitution, pardon, restoration of rights, and other related topics. Upon completion, students should be able to identify/discuss legal issues which directly affect correctional systems and personnel.

**CJC 241 – Community-Based Corrections** 3 0 0 0 3

This course covers programs for convicted offenders that are used both as alternatives to incarceration and in post-incarceration situations. Topics include offenders, diversion, house arrest, restitution, community service, probation and parole, including both public and private participation, and other related topics. Upon completion, students should be able to identify/discuss the various programs from the perspective of the criminal justice professional, the offender, and the community.

**CJC 261 – High-Risk Situations** 1 2 0 0 2

This course prepares students to employ proper response methods, including a risk and attack analysis, when faced with high-risk situations. Emphasis will be placed on cover and evacuation techniques when faced with an active, barricaded shooter, improvised explosive device recognition, and hazardous material impact assessment. Upon completion, students should be able to demonstrate an ability to analyze a high-risk situation and use the proper decision making process to respond.

**CJC 262 – High-Risk Event Planning** 1 2 0 0 2

This course introduces students to the principles of high-risk executive protection and the planning associated with security during visits from government officials and other dignitaries. Emphasis will be placed on conducting advance surveys, residential security, restaurant and banquet security, surveillance detection, and counter surveillance operations. Upon completion, students should be able to demonstrate the ability to write security plans for high-risk events.

**CMT – Construction Management**

**CMT 120 – Codes and Inspections** 3 0 0 0 3

This course covers building codes and the code inspections process used in the design and construction of residential and commercial buildings. Emphasis is placed on commercial, residential, and accessibility (ADA) building codes. Upon completion, students should understand the building code inspections process and apply building code principals and requirements to construction projects.

**CMT 210 – Construction Management Fundamentals** 3 0 0 0 3

This course introduces the student to the fundamentals of effective supervision emphasizing professionalism through knowledge and applied skills. Topics include safety, planning and scheduling, contracts, problem-solving, communications, conflict resolution, recruitment, employment laws and regulations, leadership, motivation, teamwork, discipline, setting objectives, and training. Upon completion, students should be able to demonstrate the basic skills necessary to be successful as a supervisor in the construction industry.

**CMT 212 – Total Safety Performance** 3 0 0 0 3

This course covers the importance of managing safety and productivity equally by encouraging people to take individual responsibility for safety and health in the workplace. Topics include safety management, controlling construction hazards, communicating and enforcing policies, OSHA compliance, personal responsibility and accountability, safety planning, training, and personal protective equipment. Upon completion, the student should be able to properly supervise safety at a construction jobsite and qualify for OSHA Training Certification.

**Corequisites**

CMT-210

**CMT 214 – Planning and Scheduling** 3 0 0 0 3

This course covers the need for and the process of planning construction projects, as well as the mechanics and vocabulary of project scheduling. Topics include project preplanning, scheduling formats, planning for production, short interval planning, schedule updating and revising, and computer-based planning and scheduling. Upon completion, the student should be able to understand the need for planning and scheduling, the language and logic of scheduling, and use of planning skills.

**Prerequisites**

Take All: CMT-210 and BPR-130

**CMT 216 – Costs and Productivity** 3 0 0 0 3

This course covers the relationships between time, work completed, work-hours spent, schedule duration, equipment hours, and materials used. Topics include production rates, productivity unit rates, work method improvements, and overall total project cost control. Upon completion, the student should be able to demonstrate an understanding of how costs may be controlled and productivity improved on a construction project.

**Prerequisites**  
Take CMT-210

**CMT 218 – Human Relations Issues** 3 0 0 0 3

This course provides instruction on human relations issues as they relate to construction project supervision. Topics include relationships, human behavior, project staffing issues, teamwork, effective communication networks, laws and regulations, and identifying and responding to conflict, crisis, and discipline. Upon completion, the student will demonstrate an understanding of the importance of human relations in the success of a construction project.

**Prerequisites**  
Take CMT-210

**COM – Communication**

**COM 110 – Introduction to Communication** 3 0 0 0 3

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.

**COM 120 – Intro to Interpersonal Communication** 3 0 0 0 3

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.

**COM 130 – Nonverbal Communication** 3 0 0 0 3

This course introduces the contemporary study of nonverbal communication in daily life. Topics include haptics, kinesics, proxemics, facial displays, and appearance. Upon completion, students should be able to analyze/interpret nonverbal communication and demonstrate greater awareness of their own nonverbal communication habits.

**Prerequisites**  
Take One: COM-110 or COM-120

**COM 140 – Introduction to Intercultural Communication** 3 0 0 0 3

This course introduces techniques of cultural research, definitions, functions, characteristics, and impacts of cultural differences in public address. Emphasis is placed on how diverse backgrounds influence the communication act and how cultural perceptions and experiences determine how one sends and receives messages. Upon completion, students should be able to demonstrate an understanding of the principles and skills needed to become effective in communicating outside one's primary culture.

**COM 150 – Introduction to Mass Communication** 3 0 0 0 3

This course introduces print and electronic media and the new information technologies in terms of communication theory and as economic, political, and social institutions. Topics include the nature, history, functions, and responsibilities of mass communication industries in a global environment and their role and impact in American society. Upon completion, students should be able to demonstrate awareness of the pervasive nature of mass media and how media operate in an advanced post-industrial society.

**Prerequisites**  
Take ENG-111

**COM 160 – Small Group Communication** 3 0 0 0 3

This course provides an overview of the theory, practice, and critical analysis of communication in the small group setting. Emphasis is placed on group development, conflict, and conformity; leadership skills and styles; group roles and ranks; and decision making, problem solving, and conflict resolution. Upon completion, students should be able to apply topics of gender, culture, and social-emotional functions within group settings.

**COM 231 – Public Speaking** 3 0 0 0 3

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.

This course is a Universal General Education Transfer Component course that is guaranteed to transfer for general education equivalency credit to each of the 16 institutions in the University of North Carolina system.

**COM 251 – Debate I** 3 0 0 0 3

This course introduces the principles of debate. Emphasis is placed on argument, refutation, research, and logic. Upon completion, students should be able to use research skills and logic in the presentation of ideas within the context of formal debate.

**Prerequisites**

Take COM-231;

## COS – Cosmetology

**COS 111 – Cosmetology Concepts I** 4 0 0 0 4

This course introduces basic cosmetology concepts. Topics include safety, first aid, sanitation, bacteriology, anatomy, diseases and disorders, hygiene, product knowledge, chemistry, ethics, manicures, and other related topics. Upon completion, students should be able to safely and competently apply cosmetology concepts in the salon setting.

**Corequisites**

COS-112

**COS 111AB – Cosmetology Concepts I-Part A** 2 0 0 0 2

This course introduces basic cosmetology concepts. Topics include safety, first aid, sanitation, bacteriology, anatomy, diseases and disorders, hygiene, product knowledge, chemistry, ethics, manicures, and other related topics. Upon completion, students should be able to safely and competently apply cosmetology concepts in the salon setting.

**Corequisites**

COS-112AB

**COS 111BB – Cosmetology Concepts I-Part B** 2 0 0 0 2

This course introduces basic cosmetology concepts. Topics include safety, first aid, sanitation, bacteriology, anatomy, diseases and disorders, hygiene, product knowledge, chemistry, ethics, manicures, and other related topics. Upon completion, students should be able to safely and competently apply cosmetology concepts in the salon setting.

**Corequisites**

COS-112BB

**Prerequisites**

Take COS-111AB

**COS 112 – Salon I** 0 24 0 0 8

This course introduces basic salon services. Topics include scalp treatments, shampooing, rinsing, hair color, design, haircutting, permanent waving, pressing, relaxing, wigs, and other related topics. Upon completion, students should be able to safely and competently demonstrate salon services.

**Corequisites**

COS-111

**COS 112AB – Salon I-Part A** 0 12 0 0 4

This course introduces basic salon services. Topics include scalp treatments, shampooing, rinsing, hair color, design, haircutting, permanent waving, pressing, relaxing, wigs, and other related topics. Upon completion, students should be able to safely and competently demonstrate salon services.

**Corequisites**

COS-111AB

**COS 112BB – Salon I-Part B** 0 12 0 0 4

This course introduces basic salon services. Topics include scalp treatments, shampooing, rinsing, hair color, design, haircutting, permanent waving, pressing, relaxing, wigs, and other related topics. Upon completion, students should be able to safely and competently demonstrate salon services.

**Corequisites**

COS-111BB

**Prerequisites**

Take COS-112AB

**COS 113 – Cosmetology Concepts II** 4 0 0 0 4

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.

**Corequisites**

COS-114

**Prerequisites**

Take COS-111

**COS 113AB – Cosmetology Concepts II-Part A** 2 0 0 0 2

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.

**Corequisites**

COS-114AB

**Prerequisites**

Take COS-111

**COS 113BB – Cosmetology Concepts II-Part B** 2 0 0 0 2

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.

**Corequisites**

COS-114BB

**Prerequisites**

Take COS-111 COS-113AB

**COS 114 – Salon II** 0 24 0 0 8

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.

**Corequisites**

COS-113

**Prerequisites**

Take COS-112

**COS 114AB – Salon II-Part A** 0 12 0 0 4

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.

**Corequisites**

COS-113AB

**Prerequisites**

Take COS-112

**COS 114BB – Salon II-Part B** 0 12 0 0 4

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.

**Corequisites**

COS-113BB

**Prerequisites**

Take COS-112 COS-114AB

**COS 115 – Cosmetology Concepts III** 4 0 0 0 4

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.

**Corequisites**

COS-116

**Prerequisites**

Take COS-111;

**COS 115AB – Cosmetology Concepts III-Part A** 2 0 0 0 2

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.

**Corequisites**

COS-116AB

**Prerequisites**

Take COS-111;

**COS 115BB – Cosmetology Concepts III-Part B** 2 0 0 0 2

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.

**Corequisites**

COS-116BB

**Prerequisites**

Take COS-111 COS-115AB;

**COS 116 – Salon III** 0 12 0 0 4

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.

**Corequisites**

COS-115

**Prerequisites**

Take COS-112;

**COS 116AB – Salon III-Part A** 0 6 0 0 2

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.

**Corequisites**

COS-115AB

**Prerequisites**

Take COS-112;

**COS 116BB – Salon III-Part B** 0 6 0 0 2

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.

**Corequisites**

COS-115BB

**Prerequisites**

Take COS-112 COS-116AB;

**COS 117 – Cosmetology Concepts IV** 2 0 0 0 2

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.

**Corequisites**

COS-118

**Prerequisites**

Take COS-115

**COS 117AB – Cosmetology Concepts IV-Part A** 1 0 0 0 1

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.

**Corequisites**

COS-118AB

**Prerequisites**

Take COS-115

**COS 117BB – Cosmetology Concepts IV-Part B** 1 0 0 0 1

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.

**Corequisites**

COS-118BB

**Prerequisites**

Take COS-117AB COS-115

**COS 118 – Salon IV** 0 21 0 0 7

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.

**Corequisites**  
COS-117

**COS 118AB – Salon IV-Part A** 010.5 0 0 3.5

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.

**Corequisites**  
COS-117AB

**COS 118BB – Salon IV-Part B** 010.5 0 0 3.5

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.

**Corequisites**  
COS-117BB

**COS 119 – Esthetics Concepts I** 2 0 0 0 2

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.

**Corequisites**  
COS-120

**COS 120 – Esthetics Salon I** 0 18 0 0 6

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.

**Corequisites**  
COS-119

**COS 121 – Manicure/Nail Technology I** 4 6 0 0 6

This course covers techniques of nail technology, hand and arm massage, and recognition of nail diseases and disorders. Topics include OSHA/safety, sanitation, bacteriology, product knowledge, salesmanship, manicures, artificial applications, pedicures, massage, and other related topics. Upon completion, students should be able to safely and competently perform nail care, including manicures, pedicures, massage, decorating, and artificial applications in a salon setting.

**COS 125 – Esthetics Concepts II** 2 0 0 0 2

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.

**Corequisites**  
COS-126

**COS 126 – Esthetics Salon II** 0 18 0 0 6

This course provides experience in a simulated esthetics setting. Topics include machine facials, aromatherapy, massage therapy, 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.

**Corequisites**  
COS-125

**COS 222 – Manicure/Nail Tech. II** 4 6 0 0 6

This course covers advanced techniques of nail technology and hand and arm massage. 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.

**Prerequisites**

Take COS-121

**COS 223 – Contemp Hair Coloring** 1 3 0 0 2

This course covers basic color concepts, hair coloring problems, and application techniques. Topics include color theory, terminology, contemporary techniques, product knowledge, and other related topics. Upon completion, students should be able to identify a clients color needs and safely and competently perform color applications and correct problems.

**Prerequisites**

Take COS-111 COS-112; Take COS-115 COS-116

**COS 240 – Contemporary Design** 1 3 0 0 2

This course covers methods and techniques for contemporary designs. Emphasis is placed on contemporary designs and other related topics. Upon completion, students should be able to demonstrate and apply techniques associated with contemporary design.

**Prerequisites**

Take COS-111 COS-112

**COS 240AB – Contemporary Design** 0.5 1.5 0 0 1

This course covers methods and techniques for contemporary designs. Emphasis is placed on contemporary designs and other related topics. Upon completion, students should be able to demonstrate and apply techniques associated with contemporary design.

**Prerequisites**

Take COS-111 COS-112

**COS 240BB – Contemporary Design** 0.5 1.5 0 0 1

This course covers methods and techniques for contemporary designs. Emphasis is placed on contemporary designs and other related topics. Upon completion, students should be able to demonstrate and apply techniques associated with contemporary design.

**Prerequisites**

Take COS-111 COS-112 COS-240AB

**COS 271 – Instructor Concepts I** 5 0 0 0 5

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.

**Current North Carolina Cosmetologist License and six months experience as a licensed cosmetologist is required.**

**Corequisites**

COS-272

**COS 272 – Instructor Practicum I** 0 21 0 0 7

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.

**Current North Carolina Cosmetologist License and six months experience as a licensed cosmetologist is required.**

**Corequisites**

COS-271

**COS 273 – Instructor Concepts II** 5 0 0 0 5

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.

**Corequisites**

COS-274

**Prerequisites**

Take All: COS-271 and COS-272

**COS 274 – Instructor Practicum II** 0 21 0 0 7

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.

**Corequisites**

COS-273

**Prerequisites**

Take All: COS-271 and COS-272

## CSC – Computer Science

### CSC 134 – C++ Programming 2 3 0 0 3

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.

**Corequisites**

Take CIS-115 or ELN-133

**Prerequisites**

# Take MAT-121 MAT-171 or DMA-010 through DMA-040; # Take CTS-060; #Take ENG-111 or DRE-098

### CSC 139 – Visual BASIC Programming 2 3 0 0 3

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.

**Corequisites**

CIS-115

**Prerequisites**

# Take MAT-070 MAT-080 MAT-090 MAT-095 MAT-120 MAT-121 MAT-161 MAT-171 MAT-175 or DMA-010 through DMA-040; # Take CTS-060 or CTS-080; #Take RED-090 ENG-111 ENG-095 or DRE-098

### CSC 151 – JAVA Programming 2 3 0 0 3

This course introduces computer programming using the JAVA programming language with object-oriented programming principles. Emphasis is placed on event-driven programming methods, including creating and manipulating objects, classes, and using object-oriented tools such as the class debugger. Upon completion students should be able to design, code, test, debug JAVA language programs.

**Prerequisites**

# Take MAT-070 MAT-080 MAT-090 MAT-095 MAT-120 MAT-121 MAT-161 MAT-171 MAT-175 or DMA-010 through DMA-040; # Take CTS-060 or CTS-080; #Take RED-090 ENG-111 ENG-095 or DRE-098; # Take CIS-115 or CSC-134 or CSC-139.

### CSC 153 – C# Programming 2 3 0 0 3

This course introduces computer programming using the C# programming language with object-oriented programming principles. Emphasis is placed on event-driven programming methods, including creating and manipulating objects, classes, and using object-oriented tools such as the class debugger. Upon completion, students should be able to design, code, test, debug, and implement objects using the appropriate environment at the beginning level.

**Prerequisites**

# Take MAT-070 MAT-080 MAT-090 MAT-095 MAT-120 MAT-121 MAT-161 MAT-171 MAT-175 or DMA-010 through DMA-040; # Take CTS-060 or CTS-080; # Take RED-090 ENG-111 ENG-095 or DRE-098; # Take CIS-115 CSC-134 or CSC-139.

### CSC 234 – Advanced C++ Programming 2 3 0 0 3

This course is a continuation of CSC 134 using the C++ programming language with standard programming principles. Emphasis is placed on advanced arrays/tables, file management/processing techniques, data structures, sub-programs, interactive processing, sort/merge routines, and libraries. Upon completion, students should be able to design, code, test, debug and document programming solutions.

**Prerequisites**

Take CSC-134; Take CIS-115

### CSC 239 – Advanced Visual BASIC Programming 2 3 0 0 3

This course is a continuation of CSC 139 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, debug, and implement objects using the appropriate environment.

**Prerequisites**

Take CSC-139; Take CIS-115

### CSC 251 – Advanced JAVA Programming 2 3 0 0 3

This course is a continuation of CSC 151 using the JAVA programming language with object-oriented programming principles. Emphasis is placed on event-driven programming methods, including creating and manipulating objects, classes, and using object-oriented tools such as the class debugger. Upon completion, students should be able to design, code, test, debug, and implement objects using the appropriate environment.

**Prerequisites**

Take CIS-115 and CSC-151

**CSC 253 – Advanced C# Programming** 2 3 0 0 3

This course is a continuation of CSC 153 using the C# programming language with object-oriented programming principles. Emphasis is placed on event-driven programming methods, including creating and manipulating objects, classes, and using object-oriented tools such as the class debugger. Upon completion, students should be able to design, code, test, debug, and implement objects using the appropriate environment.

**Prerequisites**

Take CSC-153

**CSC 289 – Programming Capstone Project** 1 4 0 0 3

This course provides an opportunity to complete a significant programming project from the design phase through implementation with minimal instructor support. Emphasis is placed on project definition, testing, presentation, and implementation. Upon completion, students should be able to complete a project from the definition phase through implementation.

**Prerequisites**

Take CTS-285; Take CIS-115 CSC-134 CSC-139 and completion of 36 credit hours.

**CST – Construction**

**CST 110 – Intro to Construction** 1 2 0 0 2

This course introduces construction terminology, materials, and practices found at a construction worksite. Emphasis is placed on common and innovative practices, methods, materials, and other related topics of the construction industry. Upon completion, students should be able to successfully identify various practices, methods, and materials used in the construction industry.

**CST 131 – OSHA/Safety/Certification** 2 2 0 0 3

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.

**CST 231 – Soils and Site Work** 3 2 0 0 4

This course covers site conditions and soil types and their physical properties. Topics include site preparation, access, mechanical analysis, classification of soils, and hydrostatics of groundwater. Upon completion, students should be able to adequately prepare a building site according to plans and specifications.

**Prerequisites**

Take One: MAT-121 or MAT-171

**CST 241 – Planning/Estimating I** 2 2 0 0 3

This course covers the procedures involved in planning and estimating a construction/building project. Topics include performing quantity take-offs of materials necessary for a building project. Upon completion, students should be able to accurately complete a take-off of materials and equipment needs involved in a construction project.

**Prerequisites**

Take One: BPR-130, MAT-121, or MAT-171

**CTI – Computer Technology Integration**

**CTI 110 – Web, Programming, and Database Foundation** 2 2 0 0 3

This course covers the introduction of the tools and resources available to students in programming, mark-up language and services on the Internet. Topics include standard mark-up language Internet services, creating web pages, using search engines, file transfer programs; and database design and creation with DBMS products. Upon completion students should be able to demonstrate knowledge of programming tools, deploy a web-site with mark-up tools, and create a simple database table.

**CTI 120 – Network and Security Foundation** 2 2 0 0 3

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.

**CTS – Computer Information Technology**

**CTS 060 – Essential Computer Usage** 1 2 0 0 2

This course covers the basic functions and operations of the computer. Topics include identification of components, overview of operating systems, and other basic computer operations. Upon completion, students should be able to perform basic computer commands, access files, print documents and complete fundamental application operations.

Replaced CTS-080 2013FA-Local

**CTS 115 – Information Systems Business Concepts** 3 0 0 0 3

The course introduces the role of IT in managing business processes and the need for business process and IT alignment. Emphasis is placed on industry need for understanding business challenges and developing/managing information systems to contribute to the decision making process based on these challenges. Upon completion, students should be able to demonstrate knowledge of the 'hybrid business manager' and the potential offered by new technology and systems.

**CTS 120 – Hardware/Software Support** 2 3 0 0 3

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.

**CTS 125 – Presentation Graphics** 2 2 0 0 3

This course provides hands-on experience with a graphics presentation package. Topics include terminology, effective chart usage, design and layout, integrating hardware components, and enhancing presentations with text, graphics, audio and video. Upon completion, students should be able to design and demonstrate an effective presentation.

**Prerequisites**

Take One: CIS-110 or CIS-111

**CTS 130 – Spreadsheet** 2 2 0 0 3

This course introduces basic spreadsheet design and development. Topics include writing formulas, using functions, enhancing spreadsheets, creating charts, and printing. Upon completion, students should be able to design and print basic spreadsheets and charts.

**Prerequisites**

Take CIS-110, CIS-111, or OST-137. Take 1 group; # Take MAT-060; # Take DMA-010 DMA-020 DMA-030 DMA-040;

**CTS 135 – Integrated Software Intro** 2 4 0 0 4

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.

**Prerequisites**

Take One: CIS-110 or CIS-111

**CTS 155 – Tech Support Functions** 2 2 0 0 3

This course introduces a variety of diagnostic and instructional tools that are used to evaluate the performance of technical support technologies. Emphasis is placed on technical support management techniques and support technologies. Upon completion, students should be able to determine the best technologies to support and solve actual technical support problems.

**CTS 210 – Computer Ethics** 3 0 0 0 3

This course introduces the student to current legal and ethical issues in the computer/engineering field. Topics include moral reasoning, ethical standards, intellectual property, social issues, encryption, software piracy, constitutional issues, and public policy in related matters. Upon completion, students should be able to demonstrate an understanding of the moral and social responsibilities and public policy issues facing an industry.

**Prerequisites**

Take One: NET-110, CIS-110, CIS-111, or TNE-111

**CTS 220 – Advanced Hardware/Software Support** 2 3 0 0 3

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.

**Prerequisites**

Take CTS-120

**CTS 230 – Advanced Spreadsheet** 2 2 0 0 3

This course covers advanced spreadsheet design and development. Topics include advanced functions and statistics, charting, macros, databases, and linking. Upon completion, students should be able to demonstrate competence in designing complex spreadsheets.

**Prerequisites**

Take CTS-130

**CTS 240 – Project Management** 2 2 0 0 3

This course introduces computerized project management software. Topics include identifying critical paths, cost management, and problem solving. Upon completion, students should be able to plan a complete project and project time and costs accurately.

**Prerequisites**

Take One: CIS-110 or CIS-111

**CTS 285 – Systems Analysis and Design** 3 0 0 0 3

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.

**Prerequisites**

Take CIS-115

**CTS 289 – System Support Project** 1 4 0 0 3

This course provides an opportunity to complete a significant support project with minimal instructor assistance. Emphasis is placed on written and oral communication skills, project definition, documentation, installation, testing, presentation, and user training. Upon completion, students should be able to complete a project from the definition phase through implementation.

This course must be completed at Rowan-Cabarrus Community College for graduation credit.

**Corequisites**

CTS-135 and CTS-220 and DBA-115;

**Prerequisites**

Take CTS-285;

## DBA – Database Management Technology

**DBA 110 – Database Concepts** 2 3 0 0 3

This course introduces database design and creation using a DBMS product. Emphasis is placed on data dictionaries, normalization, data integrity, data modeling, and creation of simple tables, queries, reports, and forms. Upon completion, students should be able to design and implement normalized database structures by creating simple database tables, queries, reports, and forms.

**Prerequisites**

Take CIS-110

**DBA 115 – Database Applications** 2 2 0 0 3

This course applies concepts learned in DBA 110 to a specific DBMS. Topics include manipulating multiple tables, advanced queries, screens and reports, linking, and command files. Upon completion, students should be able to create multiple table systems that demonstrate updates, screens, and reports representative of industry requirements.

**Prerequisites**

Take DBA-110; with a grade of "C" or better

**DBA 120 – Database Programming I** 2 2 0 0 3

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.

**DBA 210 – Database Administration** 2 3 0 0 3

This course covers database administration issues and distributed database concepts. Topics include database administrator (DBA) goals and functions, backup and recovery, standards and procedures, training, and database security and performance evaluations. Upon completion, students should be able to produce functional DBA documentation and administer a database.

**DBA 220 – Oracle Database Programming II** 2 2 0 0 3

This course is designed to enhance programming skills developed in DBA 120. Topics include application development with GUI front-ends and embedded programming. Upon completion, students should be able to develop an Oracle DBMS application which includes a GUI front-end and report generation.

**Prerequisites**

Take DBA-120

## DDF – Design Drafting

**DDF 211 – Design Process I** 1 6 0 0 4

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.

## DEN – Dental

**DEN 100 – Basic Orofacial Anatomy** 2 0 0 0 2

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.

Students must be enrolled in the Dental Assisting D45240 program.

**Prerequisites**

Enrollment in the Dental Assisting D45240 program.

**DEN 101 – Preclinical Procedures** 4 6 0 0 7

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.

Students must be enrolled in the Dental Assisting D45240 program.

**Prerequisites**

Enrollment in the Dental Assisting D45240 program.

**DEN 102 – Dental Materials** 3 4 0 0 5

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.

Students must be enrolled in the Dental Assisting D45240 program.

**Prerequisites**

Enrollment in the Dental Assisting D45240 program.

**DEN 103 – Dental Sciences** 2 0 0 0 2

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.

Students must be enrolled in the Dental Assisting D45240 program.

**Prerequisites**

Enrollment in the Dental Assisting D45240 program.

**DEN 103AB – Dental Sciences - Part A** 1 0 0 0 1

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. This course is restricted to diploma and/or certificate programs.

Students must be enrolled in the Dental Assisting D45240 program.

**Prerequisites**

Enrollment in the Dental Assisting D45240 program.

**DEN 103BB – Dental Sciences - Part B** 1 0 0 0 1

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. This course is restricted to diploma and/or certificate programs.

Students must be enrolled in the Dental Assisting D45240 program.

**Prerequisites**

Enrollment in the Dental Assisting D45240 program.

**DEN 104 – Dental Health Education** 2 2 0 0 3

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.

Students must be enrolled in the Dental Assisting D45240 program.

**Prerequisites**

Enrollment in the Dental Assisting D45240 program.

**DEN 105 – Practice Management** 2 0 0 0 2

This course provides a study of principles and procedures related to management of the dental practice. Emphasis is placed on maintaining clinical and financial records, patient scheduling, and supply and inventory control. Upon completion, students should be able to demonstrate fundamental skills in dental practice management.

**DEN 105AB – Practice Management - Part A** 1 0 0 0 1

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. This course is restricted to diploma and/or certificate programs.

**DEN 105BB – Practice Management - Part B** 1 0 0 0 1

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. This course is restricted to diploma and/or certificate programs.

**DEN 106 – Clinical Practice I** 1 0 12 0 5

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.

Students must be enrolled in the Dental Assisting A45240 program.

**Prerequisites**

Take DEN-101. Enrollment in the Dental Assisting D45240 program.

**DEN 107 – Clinical Practice II** 1 0 12 0 5

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.

Students must be enrolled in the Dental Assisting A45240 program.

**Prerequisites**

Take DEN-106. Enrollment in the Dental Assisting D45240 program.

**DEN 111 – Infection/Hazard Control** 2 0 0 0 2

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.

Students must be enrolled in the Dental Assisting D45240 program.

**Prerequisites**

Enrollment in the Dental Assisting D45240 program.

**DEN 112 – Dental Radiography** 2 3 0 0 3

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.

Students must be enrolled in the Dental Assisting D45240 program.

**Prerequisites**

Enrollment in the Dental Assisting D45240 program.

## DFT – Drafting

### DFT 111 – Technical Drafting I 1 3 0 0 2

This course introduces basic drafting skills, equipment, and applications. Topics include sketching, measurements, lettering, dimensioning, geometric construction, orthographic projections and pictorials drawings, sections, and auxiliary views. Upon completion, students should be able to understand and apply basic drawing principles and practices.

**Corequisites**

DFT-111A

### DFT 111A – Technical Drafting I Lab 0 3 0 0 1

This course provides a laboratory setting to enhance basic drafting skills. Emphasis is placed on practical experiences that enhance the topics presented in DFT 111. Upon completion, students should be able to apply the laboratory experiences to the concepts presented in DFT 111.

**Corequisites**

Take DFT-111 and DFT-151

### DFT 112 – Technical Drafting II 1 3 0 0 2

This course provides for advanced drafting practices and procedures. Topics include detailed working drawings, hardware, fits and tolerances, assembly and sub-assembly, geometric dimensioning and tolerancing, intersections, and developments. Upon completion, students should be able to produce detailed working drawings.

**Corequisites**

DFT-112A

**Prerequisites**

Take DFT-111

### DFT 112A – Technical Drafting II Lab 0 3 0 0 1

This course provides a laboratory setting to enhance advance drafting skills. Emphasis is placed on practical experiences that enhance the topics presented in DFT 112. Upon completion, students should be able to apply the laboratory experiences to the concepts presented in DFT 112.

**Corequisites**

DFT-112

### DFT 121 – Introduction to GDandT 1 2 0 0 2

This course introduces basic geometric dimensioning and tolerancing principles. Topics include symbols, annotation, theory, and applications. Upon completion, students should be able to interpret and apply basic geometric dimensioning and tolerancing principles to drawings.

### DFT 151 – CAD I 2 3 0 0 3

This course introduces CAD software as a drawing tool. Topics include drawing, editing, file management, and plotting. Upon completion, students should be able to produce and plot a CAD drawing.

### DFT 152 – CAD II 2 3 0 0 3

This course introduces extended CAD applications. Emphasis is placed upon intermediate applications of CAD skills. Upon completion, students should be able to use extended CAD applications to generate and manage drawings.

**Prerequisites**

Take DFT-151;

### DFT 153 – CAD III 2 3 0 0 3

This course introduces advanced CAD applications. Emphasis is placed upon advanced applications of CAD skills. Upon completion, students should be able to use advanced CAD applications to generate and manage data.

**Prerequisites**

Take DFT-152

### DFT 154 – Intro to Solid Modeling 2 3 0 0 3

This course is an introduction to basic three-dimensional solid modeling and design software. Topics include basic design, creation, editing, rendering and analysis of solid models, and creation of multiview drawings. Upon completion, students should be able to use design techniques to create, edit, render and generate a multiview drawing.

### DFT 170 – Engineering Graphics 2 2 0 0 3

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.

### DFT 254 – Intermediate Solid Modeling and Rendering 2 3 0 0 3

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.

**Prerequisites**

Take DFT-154

## DMA – Developmental Math

### DMA 010 – Operations With Integers 0.75 0.5 0 0 1

This course provides a conceptual study of integers and integer operations. Topics include integers, absolute value, exponents, square roots, perimeter and area of basic geometric figures, Pythagorean theorem, and use of the correct order of operations. Upon completion, students should be able to demonstrate an understanding of pertinent concepts and principles and apply this knowledge in the evaluation of expressions.

### DMA 020 – Fractions and Decimals 0.75 0.5 0 0 1

This course provides a conceptual study of the relationship between fractions and decimals and covers related problems. Topics include application of operations and solving contextual application problems, including determining the circumference and area of circles with the concept of pi. Upon completion, students should be able to demonstrate an understanding of the connections between fractions and decimals.

#### Prerequisites

Take DMA-010

### DMA 030 – Proportion/Ratios/Rates/Percents 0.75 0.5 0 0 1

This course provides a conceptual study of the problems that are represented by rates, ratios, percent, and proportions. Topics include rates, ratios, percent, proportion, conversion of English and metric units, and applications of the geometry of similar triangles. Upon completion, students should be able to use their understanding to solve conceptual application problems.

#### Prerequisites

Take All: DMA-010 and DMA-020

### DMA 040 – Expressions, Linear Equations, Linear Inequalities 0.75 0.5 0 0 1

This course provides a conceptual study of problems involving linear expressions, equations, and inequalities. Emphasis is placed on solving contextual application problems. Upon completion, students should be able to distinguish between simplifying expressions and solving equations and apply this knowledge to problems involving linear expressions, equations, and inequalities.

#### Prerequisites

Take One Set: Set 1: DMA-010, DMA-020 and DMA-030

Set 2: MAT-060

### DMA 050 – Graphs and Equations of Lines 0.75 0.5 0 0 1

This course provides a conceptual study of problems involving graphic and algebraic representations of lines. Topics include slope, equations of lines, interpretation of basic graphs, and linear modeling. Upon completion, students should be able to solve contextual application problems and represent real-world situations as linear equations in two variables.

#### Prerequisites

Take One Set: Set 1: DMA-010, DMA-020, DMA-030 and DMA-040

Set 2: DMA-040 and MAT-060

### DMA 060 – Polynomial and Quadratic Applications 0.75 0.5 0 0 1

This course provides a study of problems involving algebraic representations of quadratic equations. Topics include basic polynomial operations, factoring polynomials, and solving polynomial equations by means of factoring. Upon completion, students should be able to find algebraic solutions to contextual problems with quadratic applications.

#### Prerequisites

Take One Set: Set 1: DMA-010, DMA-020, DMA-030, DMA-040 and DMA-050

Set 2: DMA-040, DMA-050, and MAT-060

Set 3: MAT-060 and MAT-070

### DMA 070 – Rational Expressions and Equations 0.75 0.5 0 0 1

This course provides a study of problems involving algebraic representations of rational equations. Topics include simplifying and performing operations with rational expressions and equations, understanding the domain, and determining the reasonableness of an answer. Upon completion, students should be able to find algebraic solutions to contextual problems with rational applications.

#### Prerequisites

Take One Set: Set 1: DMA-010, DMA-020, DMA-030, DMA-040, DMA-050 and DMA-060

Set 2: DMA-040, DMA-050, DMA-060, and MAT-060

Set 3: DMA-060, MAT-060, and MAT-070

Set 4: DMA-010, DMA-020, DMA-030, DMA-060, and MAT-070

**DMA 080 – Radical Expressions and Equations** 0.75 0.5 0 0 1

This course provides a study of problems involving algebraic representations of the manipulation of radical expressions and the application of radical equations. Topics include simplifying and performing operations with radical expressions and rational exponents, solving radical equations, and determining the reasonableness of a solution. Upon completion, students should be able to find algebraic solutions to contextual problems with radical applications.

**Prerequisites**

Take One Set: Set 1: DMA-010, DMA-020, DMA-030, DMA-040, DMA-050, DMA-060 and DMA-070

Set 2: DMA-060, DMA-070, MAT-060, and MAT-070

Set 3: DMA-040, DMA-050, DMA-060, DMA-070, and MAT-060

Set 4: DMA-010, DMA-020, DMA-030, DMA-060, DMA-070, and MAT-070

## DMS – Developmental Math Shell

**DMS 001 – Developmental Math Shell 1** 0.75 0.5 0 0 1

This course provides an opportunity to customize developmental math content in specific developmental math areas. Content will be one DMA module appropriate to the required level of the student. Upon completion, students should be able to demonstrate an understanding of their specific developmental math area of content.

This course is taught using instructional software that allows for flexible pacing.

A TI-84 Plus graphing calculator is required for this course.

**Prerequisites**

Take MAT-050.

**DMS 002 – Developmental Math Shell 2** 1.5 1 0 0 2

This course provides an opportunity to customize developmental math content in specific developmental math areas. Content will be two DMA modules appropriate to the required level of the student. Upon completion, students should be able to demonstrate an understanding of their specific developmental math area of content.

This course is taught using instructional software that allows for flexible pacing.

A TI-84 Plus graphing calculator is required for this course.

**Prerequisites**

Take MAT-050.

**DMS 003 – Developmental Math Shell 3** 2.25 1.5 0 0 3

This course provides an opportunity to customize developmental math content in specific developmental math areas. Content will be three DMA modules appropriate to the required level of the student. Upon completion, students should be able to demonstrate an understanding of their specific developmental math area of content.

This course is taught using instructional software that allows for flexible pacing.

A TI-84 Plus graphing calculator is required for this course.

**Prerequisites**

Take MAT-050.

## DRA – Drama/Theatre

**DRA 111 – Theatre Appreciation** 3 0 0 0 3

This course provides a study of the art, craft, and business of the theatre. Emphasis is placed on the audience's appreciation of the work of the playwright, director, actor, designer, producer, and critic. Upon completion, students should be able to demonstrate a vocabulary of theatre terms and to recognize the contributions of various theatre artists.

**DRA 112 – Literature of the Theatre** 3 0 0 0 3

This course provides a survey of dramatic works from the classical Greek through the present. Emphasis is placed on the language of drama, critical theory, and background as well as on play reading and analysis. Upon completion, students should be able to articulate, orally and in writing, their appreciation and understanding of dramatic works.

**DRA 122 – Oral Interpretation** 3 0 0 0 3

This course introduces the dramatic study of literature through performance. Emphasis is placed on analysis and performance of poetry, drama, and prose fiction. Upon completion, students should be able to embody and discuss critically the speakers inherent in literature.

**DRA 126 – Storytelling** 3 0 0 0 3

This course introduces the art of storytelling and the oral traditions of folk literature. Topics include the history of storytelling, its value and purpose, techniques of the storyteller, and methods of collecting verbal art. Upon completion, students should be able to present and discuss critically stories from the world's repertoire of traditional lore.

**DRA 130 – Acting I** 0 6 0 0 3

This course provides an applied study of the actor's craft. Topics include role analysis, training the voice, and body concentration, discipline, and self-evaluation. Upon completion, students should be able to explore their creativity in an acting ensemble.

**DRA 132 – Stage Movement** 2 2 0 0 3

This course provides an applied study of selected principles of stage movement for actors. Topics include improvisation, mime, stage combat, clowning, choreography, and masks. Upon completion, students should be able to focus properly on stage, to create characters, and to improvise scenes, perform mimes, fight, clown, juggle, and waltz.

**Corequisites**

DRA-111

**DRA 140 – Stagecraft I** 0 6 0 0 3

This course introduces the theory and basic construction of stage scenery and properties. Topics include stage carpentry, scene painting, stage electrics, properties, and backstage organization. Upon completion, students should be able to pursue vocational and avocational roles in technical theatre.

**DRA 170 – Play Production I** 0 9 0 0 3

This course provides an applied laboratory study of the processes involved in the production of a play. Topics include fundamental practices, principles, and techniques associated with producing plays of various periods and styles. Upon completion, students should be able to participate in an assigned position with a college theatre production.

## DRE – Developmental Reading/English

**DRE 096 – Integrated Reading and Writing I** 2.5 1 0 0 3

This course is designed to develop proficiency in specific integrated and contextualized reading and writing skills and strategies. Topics include reading and writing processes, critical thinking strategies, and recognition and composition of well-developed, coherent, and unified texts; these topics are primarily taught at the introductory level using texts primarily in a Lexile (TM) range of 960 to 1115. Upon completion, students should be able to apply those skills toward understanding a variety of academic and career-related texts and composing effective paragraphs. Please note: (TM) stands for registered trademark.

**DRE 097 – Integrated Reading and Writing II** 2.5 1 0 0 3

This course is designed to develop proficiency in integrated and contextualized reading and writing skills and strategies. Topics include reading and writing processes, critical thinking strategies, and recognition and composition of well-developed, coherent, and unified texts; except where noted, these topics are taught at a reinforcement level using texts primarily in a Lexile (TM) range of 1070 to 1220. Upon completion, students should be able to demonstrate and apply those skills toward understanding a variety of complex academic and career texts and composing essays incorporating relevant, valid evidence. Please note: (TM) represents registered trademark.

**Prerequisites**

TAKE DRE-096

**DRE 098 – Integrated Reading and Writing III** 2.5 1 0 0 3

This course is designed to develop proficiency in integrated and contextualized reading and writing skills and strategies. Topics include reading and writing processes, critical thinking strategies, and recognition and composition of well-developed, coherent, and unified texts; these topics are taught using texts primarily in the Lexile (TM) range of 1185 to 1385. Upon completion, students should be able to apply those skills toward understanding a variety of texts at the career and college ready level and toward composing a documented essay. Note: (TM) represents registered trademark.

**Prerequisites**

TAKE DRE-097

**DRE 099 – Integrated Reading Writing III Option** 2 0 0 0 2

This course is designed to develop proficiency in integrated and contextualized reading and writing skills and strategies by complementing, supporting and reinforcing material covered in ENG 111. Topics include reading and writing processes, critical thinking strategies, and recognition and composition of well-developed, coherent, and unified texts; except where noted, these topics are taught using texts primarily in the Lexile (TM) range of 1185 to 1385. Upon completion, students should be able to apply those skills toward understanding a variety of texts at the career and college ready level and toward composing a documented essay. Note: (TM) represents registered trademark.

**Corequisites**

ENG-111

**Prerequisites**

TAKE DRE-097

## ECM – Electronic Commerce

### ECM 210 – Introduction to E-Commerce 2 2 0 0 3

This course introduces the concepts and tools to implement electronic commerce via the Internet. Topics include application and server software selection, securing transactions, use and verification of credit cards, publishing of catalogs, and site administration. Upon completion, students should be able to setup a working e-commerce Internet web site.

## ECO – Economics

### ECO 151 – Survey of Economics 3 0 0 0 3

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.

#### Prerequisites

Take 1 group; #Take MAT-080; #Take DMA-010 DMA-020 DMA-030 DMA-040 and DMA-050; #Take any 100 level MAT course or higher.

### ECO 251 – Principles of Microeconomics 3 0 0 0 3

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.

This course is a Universal General Education Transfer Component course that is guaranteed to transfer for general education equivalency credit to each of the 16 institutions in the University of North Carolina system.

#### Prerequisites

Take 1 group; #Take MAT-080; #Take DMA-010 DMA-020 DMA-030 DMA-040 and DMA-050; #Take any 100 level MAT course or higher.

### ECO 252 – Principles of Macroeconomics 3 0 0 0 3

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.

This course is a Universal General Education Transfer Component course that is guaranteed to transfer for general education equivalency credit to each of the 16 institutions in the University of North Carolina system.

#### Prerequisites

Take 1 group; #Take MAT-080; #Take DMA-010 DMA-020 DMA-030 DMA-040 and DMA-050; #Take any 100 level MAT course or higher.

## EDU – Education

### EDU 118 – Principles and Practices of the Instructional Assistant 3 0 0 0 3

This course covers the instructional assistant's role in the educational system. Topics include history of education, professional responsibilities and ethics, cultural diversity, communication skills, and identification of the optimal learning environment. Upon completion, students should be able to describe the supporting role of the instructional assistant, demonstrate positive communication skills, and discuss educational philosophy.

#### Corequisites

Take DRE-097

### EDU 119 – Introduction to Early Childhood Education 4 0 0 0 4

This course introduces the foundations of early childhood education, the diverse educational settings for young children, professionalism and planning intentional developmentally appropriate experiences for each child. Topics include theoretical foundations, national early learning standards, NC Foundations for Early Learning and Development, state regulations, program types, career options, professionalism, ethical conduct, quality inclusive environments, and curriculum responsive to the needs of each child/family. Upon completion, students should be able to design a career/professional development plan, and appropriate environments, schedules, and activity plans.

**EDU 131 – Child, Family, and Community** 3 0 0 0 3

This course covers the development of partnerships between culturally and linguistically diverse families, children, schools and communities. Emphasis is placed on developing skills and identifying benefits for establishing, supporting, and maintaining respectful, collaborative relationships between diverse families, programs/schools, and community agencies/resources. Upon completion, students should be able to explain appropriate relationships between families, educators, and professionals that enhance development and educational experiences of all children.

**Corequisites**

Take DRE-097

**EDU 144 – Child Development I** 3 0 0 0 3

This course includes the theories of child development, needs, milestones, and factors that influence development, from conception through approximately 36 months. Emphasis is placed on developmental sequences in physical/motor, emotional/social, cognitive, and language domains and the impact of multiple influences on development and learning. Upon completion, students should be able to compare/contrast typical/atypical developmental characteristics, explain environmental factors that impact development, and identify strategies for enhancing development.

**Corequisites**

Take DRE-097

**EDU 145 – Child Development II** 3 0 0 0 3

This course includes the theories of child development, needs, milestones, and factors that influence development, from preschool through middle childhood. Emphasis is placed on developmental sequences in physical/motor, emotional/social, cognitive, and language domains and the impact of multiple influences on development and learning. Upon completion, students should be able to compare/contrast typical/atypical developmental characteristics, explain environmental factors that impact development, and identify strategies for enhancing development.

**Corequisites**

Take DRE-097

**EDU 146 – Child Guidance** 3 0 0 0 3

This course introduces principles and practical techniques including the design of learning environments for providing developmentally appropriate guidance for all children, including those at risk. Emphasis is placed on observation skills, cultural influences, underlying causes of behavior, appropriate expectations, development of self control and the role of communication and guidance. Upon completion, students should be able to demonstrate direct/indirect strategies for preventing problem behaviors, teaching appropriate/acceptable behaviors, negotiation, setting limits and recognizing at risk behaviors.

**Corequisites**

Take DRE-097

**EDU 151 – Creative Activities** 3 0 0 0 3

This course covers planning, creation and adaptation of developmentally supportive learning environments with attention to curriculum, interactions, teaching practices and learning materials. Emphasis is placed on creating and adapting integrated, meaningful, challenging and engaging developmentally supportive learning experiences in art, music, movement and dramatics for all children. Upon completion, students should be able to create, adapt, implement and evaluate developmentally supportive learning materials, experiences and environments.

**Corequisites**

Take DRE-097

**EDU 153 – Health, Safety and Nutrition** 3 0 0 0 3

This course covers promoting and maintaining the health and well-being of all children. Topics include health and nutritional guidelines, common childhood illnesses, maintaining safe and healthy learning environments, recognition and reporting of abuse and neglect and state regulations. Upon completion, students should be able to demonstrate knowledge of health, safety, and nutritional needs, safe learning environments, and adhere to state regulations.

**Corequisites**

Take DRE-097

**EDU 162 – Observation and Assessment in Early Childhood Education** 3 0 0 0 3

This course introduces the research, benefits, goals, and ethical considerations associated with observation and assessment in Early Childhood environments. Emphasis is placed on the implementation of multiple observation/assessment strategies including anecdotal records, event samples, rating scales, and portfolios to create appropriate learning experiences. Upon completion, students should be able to practice responsible assessment and use assessments to enhance programming and collaboration for children and families.

**Corequisites**

DRE-097

**EDU 163 – Classroom Management and Instruction** 3 0 0 0 3

This course covers management and instructional techniques with school-age populations. Topics include classroom management and organization, teaching strategies, individual student differences and learning styles, and developmentally appropriate classroom guidance techniques. Upon completion, students should be able to utilize developmentally appropriate behavior management and instructional strategies that enhance the teaching/learning process and promote students' academic success.

**Corequisites**

DRE-097

**EDU 214 – Early Childhood Inter Practicum** 1 9 0 0 4

This course is designed to allow students to apply skills in a three star (minimum) or NAEYC accredited or equivalent, quality early childhood environment. Emphasis is placed on observing children and assisting with the implementation of developmentally appropriate activities and environments for all children; modeling reflective and professional practices. Upon completion, students should be able to demonstrate developmentally appropriate plans/assessments, appropriate guidance techniques and ethical/professional behaviors as indicated by assignments and onsite faculty visits.

**Corequisites**

Take DRE-098

**Prerequisites**

Take one set: Set 1: EDU-119, EDU-144, and EDU-146  
Set 2: PSY-244, EDU-119, and EDU-146

**EDU 221 – Children With Exceptionalities** 3 0 0 0 3

This course introduces children with exceptionalities, their families, support services, inclusive/diverse settings, and educational/family plans based on the foundations of child development. Emphasis is placed on the characteristics of exceptionalities, observation and assessment of children, strategies for adapting the learning environment, and identification of community resources. Upon completion, students should be able to recognize diverse abilities, describe the referral process, and depict collaboration with families/professionals to plan/implement, and promote best practice.

Please note that this is a writing intensive course.

**Corequisites**

Take DRE-098

**Prerequisites**

Take one set: Set 1: EDU-144, EDU-145 Set 2: PSY-244 PSY-245

**EDU 234 – Infants, Toddlers, and Twos** 3 0 0 0 3

This course covers the unique needs and rapid changes that occur in the first three years of life and the inter-related factors that influence development. Emphasis is placed on recognizing and supporting developmental milestones through purposeful strategies, responsive care routines and identifying elements of quality, inclusive early care and education. Upon completion, students should be able to demonstrate respectful relationships that provide a foundation for healthy infant/toddler/twos development, plan/select activities/materials, and partner with diverse families.

**Corequisites**

Take DRE-098

**Prerequisites**

Take EDU-119

**EDU 235 – School-Age Dev and Programs** 3 0 0 0 3

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. Upon completion, students should be able to discuss developmental principles for all children ages five to twelve and plan and implement developmentally-appropriate activities.

**Corequisites**

Take DRE-098

**Prerequisites**

**EDU 247 – Sensory and Physical Disabilities** 3 0 0 0 3

This course covers characteristics, intervention strategies, assistive technologies, and inclusive practices for children with sensory and physical disabilities. Topics include inclusive placement options, utilization of support services, other health impairments and family involvement for children with sensory and physical disabilities. Upon completion, students should be able to identify and utilize intervention strategies and service delivery options for those specific disabilities.

**Corequisites**

Take DRE-098

**Prerequisites**

Take one set: Set 1: EDU-144 and EDU-145 Set 2: PSY-244 and PSY-245

**EDU 248 – Developmental Delays** 3 0 0 0 3

This course covers the causes and assessment of developmental delays and individualized instruction and curriculum for children with developmental delays. Emphasis is placed on definition, characteristics, assessment, educational strategies, inclusion, family involvement, and services for children with developmental delays. Upon completion, students should be able to identify, assess, and plan educational intervention strategies for children with developmental delays and their families.

**Corequisites**

Take DRE-098.

**Prerequisites**

Take One Set: Set 1: EDU-144 and EDU-145; Set 2: PSY-244 and PSY-245

**EDU 251 – Exploration Activities** 3 0 0 0 3

This course covers discovery experiences in science, math, and social studies. Emphasis is placed on developing concepts for each area and encouraging young children to explore, discover, and construct concepts. Upon completion, students should be able to discuss the discovery approach to teaching, explain major concepts in each area, and plan appropriate experiences for children.

**Corequisites**

Take DRE-098

**EDU 254 – Music and Movement for Children** 1 2 0 0 2

This course covers the use of music and creative movement for children. Topics include a general survey of the basic elements of music and planning, designing, and implementing music and movement experiences for creative learning. Upon completion, students should be able to use voice and various musical instruments to provide musical and movement activities for children.

**Corequisites**

Take DRE-098

**EDU 259 – Curriculum Planning** 3 0 0 0 3

This course is designed to focus on curriculum planning for three to five year olds. Topics include philosophy, curriculum models, indoor and outdoor environments, scheduling, authentic assessment, and planning developmentally appropriate experiences. Upon completion, students should be able to evaluate children's development, critique curriculum, plan for individual and group needs, and assess and create quality environments.

**Corequisites**

Take DRE-098

**Prerequisites**

Take EDU-119

**EDU 261 – Early Childhood Administration I** 3 0 0 0 3

This course introduces principles of basic programming and staffing, budgeting/financial management and marketing, and rules and regulations of diverse early childhood programs. Topics include program structure and philosophy, standards of NC child care programs, finance, funding resources, and staff and organizational management. Upon completion, students should be able to develop components of program/personnel handbooks, a program budget, and demonstrate knowledge of fundamental marketing strategies and NC standards.

**Corequisites**

Take All: DRE-098 and EDU-119.

**EDU 262 – Early Childhood Administration II** 3 0 0 0 3

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.

**Corequisites**

Take All: DRE-098 and EDU-119

**Prerequisites**

Take EDU-261

**EDU 271 – Educational Technology** 2 2 0 0 3

This course introduces the use of technology to enhance teaching and learning in all educational settings. Topics include technology concepts, instructional strategies, materials and adaptive technology for children with exceptionalities, facilitation of assessment/evaluation, and ethical issues surrounding the use of technology. Upon completion, students should be able to apply technology enhanced instructional strategies, use a variety of technology resources and demonstrate appropriate technology skills in educational environments.

**Corequisites**

Take DRE-098

**EDU 280 – Language and Literacy Experiences 3 0 0 0 3**

This course is designed to expand students' understanding of children's language and literacy development and provides strategies for enhancing language/literacy experiences in an enriched environment. Topics include selection of diverse literature and interactive media, the integration of literacy concepts throughout the curriculum, appropriate observations/assessments and inclusive practices. Upon completion, students should be able to select, plan, implement and evaluate developmentally appropriate and diverse language/literacy experiences.

**Corequisites**

DRE-098

**EDU 281 – Instructional Strategies in Reading and Writing 2 2 0 0 3**

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.

Please note that this is a writing intensive course.

**Corequisites**

DRE-098

**EDU 282 – Early Childhood Literature 3 0 0 0 3**

This course covers the history, selection, and integration of literature and language in the early childhood curriculum. Topics include the history and selection of developmentally appropriate children's literature and the use of books and other media to enhance language and literacy in the classroom. Upon completion, students should be able to select appropriate books for storytelling, reading aloud, puppetry, flannel board use, and other techniques.

Please note that this is a writing intensive course.

**Corequisites**

DRE-098

**EDU 284 – Early Childhood Capstone Practicum 1 9 0 0 4**

This course is designed to allow students to apply 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/involving families; and modeling reflective and professional practices. Upon completion, students should be able to demonstrate developmentally appropriate plans/assessments, appropriate guidance techniques and ethical/professional behaviors as indicated by assignments and onsite faculty visits.

**Corequisites**

DRE-098

**Prerequisites**

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, PSY-245, EDU-144, EDU-146, and EDU-151 Set 4: EDU-119, PSY-244, EDU-145, EDU-146, and EDU-151

**EDU 285 – Internship Experiences-School Age 1 9 0 0 4**

This course is designed to allow students to apply skills in a quality public or private school environment. Emphasis is placed on designing, implementing and evaluating developmentally appropriate activities and environments for all children; supporting/involving families; and modeling reflective and professional practices. Upon completion, students should be able to demonstrate developmentally appropriate lesson plans/assessments, appropriate guidance techniques, ethical/professional behaviors as indicated by assignments and onsite faculty visits.

**Corequisites**

DRE-098

**Prerequisites**

Take One Set: Set 1: EDU 144, EDU 145, EDU 118, EDU 163 Set 2: PSY 244, PSY 245, EDU 118, EDU 163 Set 3: PSY 244, EDU 145, EDU 118, EDU 163 Set 4: EDU 144, PSY 245, EDU 118, EDU 163 Set 5: PSY 244, PSY 245, EDU 216, EDU 163 Set 6: EDU 144, EDU 145, EDU 216, EDU 163 Set 7: EDU 144, PSY 245, EDU 216, EDU 163 Set 8: PSY 244, EDU 216, EDU 163

**EDU 289 – Advanced Issues/School Age 2 0 0 0 2**

This course covers advanced topics and issues that relate to school-age programs. Emphasis is placed on current advocacy issues, emerging technology, professional growth, ethics, and organizations for providers/teachers working with school-age populations. Upon completion, students should be able to list, discuss, and explain advanced current topics and issues surrounding school-aged populations.

**Corequisites**

DRE-098

## EGR – Engineering

### EGR 115 – Intro to Technology 2 3 0 0 3

This course introduces the basic skills and career fields for technicians. Topics include career options, technical vocabulary, dimensional analysis, measurement systems, engineering graphics, calculator applications, professional ethics, safety practices, and other related topics. Upon completion, students should be able to demonstrate an understanding of the basic technologies, prepare drawings and sketches, and perform computations using a scientific calculator.

### EGR 125 – Appl Software for Tech 1 2 0 0 2

This course introduces personal computer software and teaches students how to customize the software for technical applications. Emphasis is placed on the use of common office applications software programs such as spreadsheets, word processing, graphics, and internet access. Upon completion, students should be able to demonstrate competency in using applications software to solve technical problems and communicate the results in text and graphical formats.

### EGR 131 – Introduction to Electronics Tech 1 2 0 0 2

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.

### EGR 150 – Intro to Engineering 1 2 0 0 2

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.

### EGR 250 – Statics/Strength of Mater 4 3 0 0 5

This course includes vector analysis, equilibrium of force systems, friction, sectional properties, stress/strain, and deformation. Topics include resultants and components of forces, moments and couples, free-body diagrams, shear and moment diagrams, trusses, frames, beams, columns, connections, and combined stresses. Upon completion, students should be able to analyze simple structures.

#### Prerequisites

Take One: MAT-121 or MAT-171

### EGR 251 – Statics 2 2 0 0 3

This course covers the concepts and principles of statics. Topics include systems of forces and moments on structures in two- and three-dimensions in equilibrium. Upon completion, students should be able to analyze forces and moments on structures.

### EGR 252 – Strength of Materials 2 2 0 0 3

This course covers the principles and concepts of stress analysis. Topics include centroids, moments of inertia, shear/moment diagrams, and stress and strain. Upon completion, students should be able to perform a stress and strain analysis on structural components.

#### Prerequisites

Take EGR-251

### EGR 285 – Design Project 0 4 0 0 2

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.

#### Prerequisites

Take ELN-131 ELN-133

## EHS – Environmental Health and Safety

### EHS 215 – Incident Management 3 2 0 0 4

This course introduces management of hazardous materials and incidents. Topics include analysis and application of the Incident Command System from the discovery of a hazardous substance release to decontamination and termination procedures. Upon completion, students should be able to demonstrate an understanding of the roles and responsibilities of hazardous materials team members.

## ELC – Electrical

### ELC 112 – DC/AC Electricity 3 6 0 0 5

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.

#### Corequisites

ELC-126

**ELC 113 – Residential Wiring** 2 6 0 0 4

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.

**Corequisites**

ELC-118

**ELC 115 – Industrial Wiring** 2 6 0 0 4

This course covers layout, planning, and installation of wiring systems in industrial facilities. Emphasis is placed on industrial wiring methods and materials. Upon completion, students should be able to install industrial systems and equipment.

**Prerequisites**

Take ELC-113 ELC-117

**ELC 117 – Motors and Controls** 2 6 0 0 4

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.

**Prerequisites**

Take ELC-111 ELC-112 or ELC-131

**ELC 118 – National Electrical Code** 1 2 0 0 2

This course covers the use of the current National Electrical Code. Topics include the NEC history, wiring methods, overcurrent protection, materials, and other related topics. Upon completion, students should be able to effectively use the NEC.

**ELC 119 – NEC Calculations** 1 2 0 0 2

This course covers branch circuit, feeder, and service calculations. Emphasis is placed on sections of the National Electrical Code related to calculations. Upon completion, students should be able to use appropriate code sections to size wire, conduit, and overcurrent devices for branch circuits, feeders, and service.

**ELC 125 – Diagrams and Schematics** 1 2 0 0 2

This course covers the interpretation of electrical diagrams, schematics, and drawings common to electrical applications. Emphasis is placed on reading and interpreting electrical diagrams and schematics. Upon completion, students should be able to read and interpret electrical diagrams and schematics.

**ELC 126 – Electrical Computations** 2 2 0 0 3

This course introduces the fundamental applications of mathematics which are used by an electrical/electronics technician. Topics include whole numbers, fractions, decimals, powers, roots, simple electrical formulas, and usage of a scientific calculator. Upon completion, students should be able to solve simple electrical mathematical problems.

**ELC 128 – Introduction to Programmable Logic Controller** 2 3 0 0 3

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.

**Prerequisites**

Take ELC-117 ELC-125 or ELN-229

**ELC 138 – DC Circuit Analysis** 3 3 0 0 4

This course introduces DC electricity with an emphasis on circuit analysis, measurements, and operation of test equipment. Topics include DC principles, circuit analysis laws and theorems, components, test equipment operation, circuit simulation, and other related topics. Upon completion, students should be able to interpret circuit schematics; design, construct, and analyze DC circuits; and properly use test equipment.

**ELC 139 – AC Circuit Analysis** 3 3 0 0 4

This course introduces AC electricity with an emphasis on circuit analysis, measurements, and operation of test equipment. Topics include AC voltages, circuit analysis laws and theorems, reactive components and circuits, transformers, test equipment operation, circuit simulation, and other related topics. Upon completion, students should be able to interpret AC circuit schematics; analyze and troubleshoot AC circuits; and properly use test equipment.

**ELC 215 – Electrical Maintenance** 2 3 0 0 3

This course introduces the theory of maintenance and the skills necessary to maintain electrical equipment found in industrial and commercial facilities. Topics include maintenance theory, predictive and preventive maintenance, electrical equipment operation and maintenance, and maintenance documentation. Upon completion, students should be able to perform maintenance on electrical equipment in industrial and commercial facilities.

**Prerequisites**

Take ELC-117

**ELC 228 – Programmable Logic Controllers**

**Applications** 2 6 0 0 4

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.

**Prerequisites**

Take ELC-128;

## ELN – Electronics

**ELN 131 – Analog Electronics I** 3 3 0 0 4

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.

**Corequisites**

ELC-139

**ELN 132 – Analog Electronics II** 3 3 0 0 4

This course covers additional applications of analog electronic circuits with an emphasis on analog and mixed signal integrated circuits (IC). Topics include amplification, filtering, oscillation, voltage regulation, and other analog circuits. Upon completion, students should be able to construct, analyze, verify, and troubleshoot analog electronic circuits using appropriate techniques and test equipment.

**ELN 133 – Digital Electronics** 3 3 0 0 4

This course covers combinational and sequential logic circuits. Topics include number systems, Boolean algebra, logic families, medium scale integration (MSI) and large scale integration (LSI) circuits, analog to digital (AD) and digital to analog (DA) conversion, and other related topics. Upon completion, students should be able to construct, analyze, verify, and troubleshoot digital circuits using appropriate techniques and test equipment.

**ELN 135 – Electronic Circuits** 2 3 0 0 3

This course covers discrete component amplifiers, power supplies, wave-shaping, oscillators, and special purpose ICs. Topics include feedback, analog arithmetic circuits, current and voltage sources, amplifiers, timers, filters, regulators, and other related circuits. Upon completion, students should be able to determine, by the configuration, the function of common analog circuits and troubleshoot circuits based on applications.

**Prerequisites**

Take ELN-131

**ELN 150 – Computer-Aided Drafting for Electronics** 1 3 0 0 2

This course introduces computer-aided drafting (CAD) with an emphasis on applications in the electronics field. Topics include electronics industry standards (symbols, schematic diagrams, layouts); drawing electronic circuit diagrams; and specialized electronic drafting practices and components such as resistors, capacitors, and ICs. Upon completion, students should be able to prepare electronic drawings with CAD software.

**ELN 229 – Industrial Electronics** 3 3 0 0 4

This course covers semiconductor devices used in industrial applications. Topics include the basic theory, application, and operating characteristics of semiconductor devices. Upon completion, students should be able to construct and/or troubleshoot these devices for proper operation in an industrial electronic circuit.

**Prerequisites**

Take ELC-139

**ELN 232 – Introduction to Microprocessors** 3 3 0 0 4

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.

**ELN 234 – Communication Systems** 3 3 0 0 4

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.

**Prerequisites**

Take ELN-131

**EMS – Emergency Medical Science**

**EMS 110 – EMT** 6 6 0 0 8

This course introduces basic emergency medical care. Topics include preparatory, airway, patient assessment, medical emergencies, trauma, infants and children, and operations. Upon completion, students should be able to demonstrate the knowledge and skills necessary to achieve North Carolina State or National Registry EMT certification.

**EMS 140 – Rescue Scene Management** 1 3 0 0 2

This course introduces rescue scene management. Topics include response to hazardous material conditions, incident command, and extrication of patients from a variety of situations. Upon completion, students should be able to recognize and manage rescue operations based upon initial and follow-up scene assessment.

**EMS 140A – Rescue Scene Skills Lab** 0 3 0 0 1

This course is designed to provide enhanced rescue scene skills for EMS providers. Emphasis is placed on advanced rescue scene evolutions including hazardous materials and major incident response. Upon completion, students should be able to demonstrate skills necessary to safely effect patients rescue in a variety of situations.

**Corequisites**

EMS-140

**EMS 150 – Emergency Vehicles and EMS Communication** 1 3 0 0 2

This course covers the principles governing emergency vehicles, maintenance of emergency vehicles, and EMS communication equipment. Topics include applicable motor vehicle laws affecting emergency vehicle operation, defensive driving, collision avoidance techniques, communication systems, and information management systems. Upon completion, students should have a basic knowledge of emergency vehicles, maintenance, and communication needs.

**ENG – English**

**ENG 102 – Applied Communications II** 3 0 0 0 3

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.

**ENG 111 – Writing and Inquiry** 3 0 0 0 3

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 is a Universal General Education Transfer Component course that is guaranteed to transfer for general education equivalency credit to each of the 16 institutions in the University of North Carolina system.

**Prerequisites**

Take DRE-098

**ENG 112 – Writing and Research in the Disciplines** 3 0 0 0 3

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.

This course is a Universal General Education Transfer Component course that is guaranteed to transfer for general education equivalency credit to each of the 16 institutions in the University of North Carolina system.

**Prerequisites**

Take ENG-111

**ENG 113 – Literature-Based Research** 3 0 0 0 3

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.

**Prerequisites**

Take ENG-111

**ENG 114 – Professional Research and Reporting** 3 0 0 0 3

This course, the second in a series of two, is designed to teach professional communication skills. Emphasis is placed on research, listening, critical reading and thinking, analysis, interpretation, and design used in oral and written presentations. Upon completion, students should be able to work individually and collaboratively to produce well-designed business and professional written and oral presentations.

**Prerequisites**

Take ENG-111

**ENG 125 – Creative Writing I** 3 0 0 0 3

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.

**Prerequisites**

Take ENG-111

**ENG 126 – Creative Writing II** 3 0 0 0 3

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.

Please note that this is a writing intensive course.

**Prerequisites**

Take ENG-125

**ENG 131 – Introduction to Literature** 3 0 0 0 3

This course introduces the principal genres of literature. Emphasis is placed on literary terminology, devices, structure, and interpretation. Upon completion, students should be able to analyze and respond to literature.

**Prerequisites**

Take ENG-111

**ENG 132 – Introduction to Drama** 3 0 0 0 3

This course provides intensive study of drama as a literary form, based on close reading of representative texts. Emphasis is placed on the development and analysis of drama. Upon completion, students should be able to interpret, analyze, and discuss the distinguishing features of drama.

**Prerequisites**

Take ENG-111

**ENG 231 – American Literature I** 3 0 0 0 3

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.

This course is a Universal General Education Transfer Component course that is guaranteed to transfer for general education equivalency credit to each of the 16 institutions in the University of North Carolina system.

**Prerequisites**

Take One: ENG-112, ENG 113, or ENG 114

**ENG 232 – American Literature II** 3 0 0 0 3

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.

This course is a Universal General Education Transfer Component course that is guaranteed to transfer for general education equivalency credit to each of the 16 institutions in the University of North Carolina system.

**Prerequisites**

Take One: ENG-112, ENG-113, or ENG-114

**ENG 235 – Survey of Film As Lit** 3 0 0 0 3

This course provides a study of the medium of film with a focus on the historical impact and the various literary genres of movies. Emphasis is placed on an appreciation of film as a form of literature which demonstrates various elements of fiction (character, setting, theme, etc.). Upon completion, students should be able to analyze film critically in various literary contexts.

**Prerequisites**

Take ENG-113

**ENG 241 – British Literature I** 3 0 0 0 3

This course covers selected works in British literature from its beginnings to the Romantic Period. Emphasis is placed on historical background, cultural context, and literary analysis of selected prose, poetry, and drama. Upon completion, students should be able to interpret, analyze, and respond to literary works in their historical and cultural contexts.

**Prerequisites**

Take ENG-112, ENG-113, or ENG-114

**ENG 242 – British Literature II** 3 0 0 0 3

This course covers selected works in British literature from the Romantic Period to the present. Emphasis is placed on historical background, cultural context, and literary analysis of selected prose, poetry, and drama. Upon completion, students should be able to interpret, analyze, and respond to literary works in their historical and cultural contexts.

**Prerequisites**

Take One: ENG-112, ENG-113, or ENG-114

**ENG 243 – Major British Writers** 3 0 0 0 3

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.

**Prerequisites**

Take One: ENG-112, ENG-113, or ENG-114

**ENG 251 – Western World Literature I** 3 0 0 0 3

This course provides a survey of selected European works from the Classical period through the Renaissance. Emphasis is placed on historical background, cultural context, and literary analysis of selected prose, poetry, and drama. Upon completion, students should be able to interpret, analyze, and respond to selected works.

**Prerequisites**

Take One: ENG-112, ENG-113, or ENG-114

**ENG 252 – Western World Literature II** 3 0 0 0 3

This course provides a survey of selected European works from the Neoclassical period to the present. Emphasis is placed on historical background, cultural context, and literary analysis of selected prose, poetry, and drama. Upon completion, students should be able to interpret, analyze, and respond to selected works.

**Prerequisites**

Take One: ENG-112, ENG-113, or ENG-114

**ENG 261 – World Literature I** 3 0 0 0 3

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.

**Prerequisites**

Take One: ENG-112, ENG-113, or ENG-114

**ENG 262 – World Literature II** 3 0 0 0 3

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.

**Prerequisites**

Take One: ENG-112, ENG-113, or ENG-114

**ENG 272 – Southern Literature** 3 0 0 0 3

This course provides an analytical study of the works of several Southern authors. Emphasis is placed on the historical and cultural contexts, themes, aesthetic features of individual works, and biographical backgrounds of the authors. Upon completion, students should be able to interpret, analyze, and discuss selected works.

**Prerequisites**

Take One: ENG-112, ENG-113, or ENG-114

**ENG 273 – African-American Literature** 3 0 0 0 3

This course provides a survey of the development of African-American literature from its beginnings to the present. Emphasis is placed on historical and cultural context, themes, literary traditions, and backgrounds of the authors. Upon completion, students should be able to interpret, analyze, and respond to selected texts.

**Prerequisites**

Take One: ENG-112, ENG-113, or ENG-114

**ENG 274 – Literature by Women** 3 0 0 0 3

This course provides an analytical study of the works of several women authors. Emphasis is placed on the historical and cultural contexts, themes and aesthetic features of individual works, and biographical backgrounds of the authors. Upon completion, students should be able to interpret, analyze, and discuss selected works.

**Prerequisites**

Take One: ENG-112, ENG-113, or ENG-114

## EPT – Emergency Preparedness

### EPT 120 – Sociology of Disaster 3 0 0 0 3

This course is designed to overview sociological disaster research, disaster systems, and alternative research approaches. Topics include human and organizational behaviors, long disaster impact on communities, disaster warning, and evacuation considerations. Upon completion, students should be able to assess and predict the impact of disaster-related human behavior

### EPT 124 – EM Services Law and Ethics 3 0 0 0 3

This course covers federal and state laws that affect emergency service personnel in the event of a natural disaster or terrorist incident. Topics include initial response and long-term management strategies, with an emphasis on legal and ethical considerations and coordination between local, state, and federal agencies. Upon completion, students should have an understanding of the role of private industry, government agencies, public policies, and federal/state declarations of disasters in emergency situations.

### EPT 130 – Mitigation and Preparedness 3 0 0 0 3

This course introduces the mitigation and preparation techniques and methods necessary to minimize the impact of natural, technological, and man-made disasters. Topics include hazard identification and mapping, design and construction applications, financial incentives, insurance, structural controls, preparation, planning, assessment, implementation, and exercises. Upon completion students should be able to develop a mitigation and preparedness plan.

### EPT 140 – Emergency Management 3 0 0 0 3

This course covers the four phases of emergency management: mitigation, preparedness, response, and recovery. Topics include organizing for emergency management, coordinating for community resources, public sector liability, and the roles of government agencies at all levels. Upon completion, students should be able to demonstrate an understanding of comprehensive emergency management and the integrated emergency management system.

### EPT 150 – Incident Management 3 0 0 0 3

This course introduces the National Incident Management System (NIMS). Topics include integrating command and control systems, maintaining communication within command and control systems, and using NIMS procedures. Upon completion, students should be able to demonstrate knowledge of key concepts necessary for operating within the National Incident Management System.

### EPT 210 – Response and Recovery 3 0 0 0 3

This course introduces the basic concepts, operational procedures, and authorities involved in response and recovery efforts to major disasters. Topics include federal, state, and local roles and responsibilities in major disaster, response, and recovery work, with an emphasis on governmental coordination. Upon completion, students should be able to implement a disaster response plan and assess the needs of those involved in a major disaster.

### EPT 220 – Terrorism and Emergency Management 3 0 0 0 3

This course covers preparing for, responding to, and safely mitigating terrorism incidents. Topics include the history of terrorism, scene hazards, evidence preservation, risk assessment, roles and responsibilities, explosive recognition, and terrorism planning. Upon completion, students should be able to recognize the threat of terrorism and operate within the emergency management framework at a terrorism incident.

### EPT 225 – Hazard Analysis/Risk Assessment 3 0 0 0 3

This course covers the probability and frequency of hazards, level of hazard exposure, and the effect or cost, both direct and indirect, of this exposure. Topics include identifying and characterizing hazards, evaluating hazard severity and frequency, estimating risks, and determining potential societal and economic effects. Upon completion, students should be able to identify the potential hazards and risks within a community.

### EPT 230 – Emergency Planning 3 0 0 0 3

This course covers the rationale for and methods related to a comprehensive approach to emergency planning. Topics include the emergency planning process, command arrangement, coordination, budgetary issues, environmental contamination issues, and public policy concerns. Upon completion, students should be able to develop an emergency plan for a community.

### EPT 260 – Business Continuity 3 0 0 0 3

This course covers emergency preparedness techniques necessary to maintain business continuity. Topics include critical processes, planning, risk assessment, impact analysis, mitigation strategies, response, recovery and resumption activities. Upon completion, students should be able to demonstrate a working knowledge of the partnership between business and emergency response.

### EPT 275 – Emergency Operations Center Management 3 0 0 0 3

This course provides students with the knowledge and skills to effectively manage and operate an emergency operations center (EOC) during crisis situations. Topics include properly locating and designing an EOC, staffing, training and briefing EOC personnel, and how to operate an EOC. Upon completion, students should be able to demonstrate how to set up and operate an effective emergency operations center.

## ETR – Entrepreneurship

### ETR 210 – Introduction to Entrepreneurship 3 0 0 0 3

This course provides a survey of the starting and operating of an entrepreneurial venture. Topics include new venture creation, the business plan, economics of the business, determining resource needs and acquiring resources, marketing, technology, leadership skills, and business ethics. Upon completion, students should be able to demonstrate an understanding of entrepreneurship concepts and how to use the entrepreneurial mindset to succeed in their careers.

### ETR 215 – Law for Entrepreneurs 3 0 0 0 3

This course introduces students to basic legal concepts specifically relevant to a business start-up venture. Topics include bailments and documents of title, nature and form of sales, risk and property rights, obligations and performance, business organizations, and agency and employment. Upon completion, students should be able to assess the legal responsibilities of a business start-up.

### ETR 220 – Innovation and Creativity 3 0 0 0 3

This course provides a study of developing and enhancing individual and organizational creativity and innovation. Topics include that innovation needs to be applied to products, services, and processes to increase competitive advantages and add value to businesses. Upon completion, students should be able to apply innovation and creativity principles in the work place.

### ETR 230 – Entrepreneur Marketing 3 0 0 0 3

This course covers the techniques to correctly research and define the target market to increase sales for start up businesses or to expand current businesses. Topics include how to target market and meet customers' needs with a limited budget in the early stages of the life of a start up business. Upon completion, students should be able to demonstrate an understanding of how to correctly target market for a start-up business with limited resources.

### ETR 240 – Funding for Entrepreneurs 3 0 0 0 3

This course provides a focus on the financial issues and needs confronting entrepreneurs attempting to grow their businesses by attracting startup and growth capital. Topics include sources of funding including angel investors, venture capital, IPO's, private placement, banks, suppliers, buyers, partners, and the government. Upon completion, students should be able to demonstrate an understanding of how to effectively finance a business venture.

#### Prerequisites

Take ACC-120

### ETR 270 – Entrepreneurship Issues 3 0 0 0 3

This course introduces current and emerging entrepreneurship issues and opportunities. Topics include franchising, import/export, small business taxes, legal structures, negotiations, contract management, and time management. Upon completion, students should be able to apply a variety of analytical and decision-making requirements to start a new business.

## FIP – Fire Protection

### FIP 120 – Introduction to Fire Protection 3 0 0 0 3

This course provides an overview of the development, methods, systems and regulations that apply to the fire protection field. Topics include history, evolution, statistics, suppression, organizations, careers, curriculum, and related subjects. Upon completion, students should be able to demonstrate a broad understanding of the fire protection field.

### FIP 124 – Fire Prevention and Public Education 3 0 0 0 3

This course introduces fire prevention concepts as they relate to community and industrial operations referenced in NFPA standard 101. Topics include the development and maintenance of fire prevention programs, educational programs, and inspection programs. Upon completion, students should be able to research, develop, and present a fire safety program to a citizens or industrial group.

### FIP 128 – Detection and Investigation 3 0 0 0 3

This course covers procedures for determining the origin and cause of accidental and incendiary fires referenced in NFPA standard 921. Topics include collection and preservation of evidence, detection and determination of accelerants, courtroom procedure and testimony, and documentation of the fire scene. Upon completion, students should be able to conduct a competent fire investigation and present those findings to appropriate officials or equivalent.

### FIP 132 – Building Construction 3 0 0 0 3

This course covers the principles and practices reference in NFPA standard 220 related to various types of building construction, including residential and commercial, as impacted by fire conditions. Topics include types of construction and related elements, fire resistive aspects of construction materials, building codes, collapse, and other related topics. Upon completion, students should be able to understand and recognize various types of construction and their positive or negative aspects as related to fire conditions.

**FIP 136 – Inspections and Codes** 3 0 0 0 3

This course covers the fundamentals of fire and building codes and procedures to conduct an inspection referenced in NFPA standard 1730. Topics include review of fire and building codes, writing inspection reports, identifying hazards, plan reviews, site sketches, and other related topics. Upon completion, students should be able to conduct a fire code compliance inspection and produce a written report.

**FIP 140 – Industrial Fire Protection** 3 0 0 0 3

This course covers fire protection systems in industrial facilities referenced in NFPA standard 1. Topics include applicable health and safety standards, insurance carrier regulations, other regulatory agencies, hazards of local industries, fire brigade operation, and loss prevention programs. Upon completion, students should be able to plan and evaluate an industrial facility's fire protection program.

**FIP 144 – Sprinklers and Automatic Alarms** 2 2 0 0 3

This course introduces various types of automatic sprinklers, standpipes, and fire alarm systems. Topics include wet or dry systems, testing and maintenance, water supply requirements, fire detection and alarm systems, and other related topics. Upon completion, students should be able to demonstrate a working knowledge of various sprinkler and alarm systems and required inspection and maintenance.

**FIP 146 – Fire Protection Systems** 3 2 0 0 4

This course introduces various types of automatic sprinklers, standpipes, fire alarm systems, and fixed and portable extinguishing systems referenced in NFPA standard 25, including their operation, installation, and maintenance. Topics include wet and dry systems, testing and maintenance, water supply requirements, fire detection and alarm systems, including application, testing, and maintenance of Halon, carbon dioxide, dry chemical, and special extinguishing agents utilized in fixed and portable systems. Upon completion, students should be able to demonstrate a working knowledge of sprinkler and alarm systems, both fixed and portable, including appropriate application, operation, inspection, and maintenance requirements.

**FIP 152 – Fire Protection Law** 3 0 0 0 3

This course covers fire protection law as referenced in NFPA standard 1. Topics include legal terms, contracts, liability, review of case histories, and other related topics. Upon completion, students should be able to discuss laws, codes, and ordinances as they relate to fire protection.

**FIP 164 – OSHA Standards** 3 0 0 0 3

This course covers public and private sector OSHA work site requirements referenced in NFPA standard 1250. Emphasis is placed on accident prevention and reporting, personal safety, machine operations, and hazardous material handling. Upon completion, students should be able to analyze and interpret specific OSHA regulations and write workplace policies designed to achieve compliance.

**FIP 176 – HazMat: Operations** 4 0 0 0 4

This course is designed to increase first responder awareness of the type, nature, physiological effects of, and defensive techniques for mitigation of HazMat incidents. Topics include recognition, identification, regulations and standards, zoning, resource usage, defensive operations, and other related topics. Upon completion, students should be able to recognize and identify the presence of hazardous materials and use proper defensive techniques for incident mitigation.

**FIP 180 – Wildland Fire Behavior** 3 0 0 0 3

This course covers the principles of wildland fire behavior and meteorology referenced in NFPA standard 1143. Emphasis is placed on fire calculations, fuels, and related weather effects. Upon completion, students should be able to demonstrate and apply fire behavior theories through written and performance evaluations.

**FIP 184 – Wildland Fire Safety** 3 0 0 0 3

This course covers safety principles used when working in the wildland fire environment referenced in NFPA standard 1143. Emphasis is placed on personal safety and working with equipment, aircraft, and fire-ground operations. Upon completion, students should be able to understand and demonstrate fire safety procedures through written and performance evaluations.

**FIP 220 – Fire Fighting Strategies** 3 0 0 0 3

This course provides preparation for command of initial incident operations involving emergencies within both the public and private sector referenced in NFPA standards 1561, 1710, and 1720. Topics include incident management, fire-ground tactics and strategies, incident safety, and command/control of emergency operations. Upon completion, students should be able to describe the initial incident system as it relates to operations involving various emergencies in fire and non-fire situations.

**FIP 221 – Advanced Fire Fighting Strategies** 3 0 0 0 3

This course covers command-level operations for multi-company/agency operations involving fire and non-fire emergencies. Topics include advanced use of the Incident Command System(ICS), advanced incident analysis, command-level fire operations, and control of both man made and natural major disasters. Upon completion, students should be able to describe proper and accepted systems for the mitigation of emergencies at the level of overall scene command.

**Prerequisites**

Take FIP-220

**FIP 224 – Fire Instructor I and II** 4 0 0 0 4

This course covers the knowledge, skills, and abilities needed to train others in fire service operations. Topics include planning, presenting, and evaluating lesson plans, learning styles, use of media, communication, and other related topics. Upon completion, students should be able to meet the requirements of the Fire Instructor I and II objectives from National Fire Protection Association (NFPA) 1041.

**FIP 226 – Fire Officer I and II** 4 0 0 0 4

This course covers the knowledge, skills, and requirements referenced in the National Fire Protection Association (NFPA) Standard 1021 for Fire Officer I and II training. Topics include officer roles and responsibilities, budgets, fire cause determination, inspections, education, leadership, management, public relations, and other requirements included in the NFPA standard. Upon completion, students should be able to demonstrate an understanding of relevant NFPA standards as required for state Fire Officer I and II certification.

**FIP 228 – Local Government Finance** 3 0 0 0 3

This course introduces local governmental financial principles and practices. Topics include budget preparation and justification, revenue policies, statutory requirements, audits, and the economic climate. Upon completion, students should be able to comprehend the importance of finance as it applies to the operations of a department.

**FIP 229 – Fire Dynamics and Combustion** 3 0 0 0 3

This course covers the theories and fundamentals of how and why fires start and spread, and how they are safely controlled referenced in NFPA standard 1001. Topics include components of fire, fire sources, fire behavior, properties of combustible solids, classification of hazards, and the use of fire extinguishing agents. Upon completion, students should be able to describe the properties of matter and dynamics of fire, identify fuel sources, and compare suppressants and extinguishment techniques.

**FIP 230 – Chemistry of Hazardous Materials I** 5 0 0 0 5

This course covers the evaluation of hazardous materials referenced in NFPA standard 1072. Topics include use of the periodic table, hydrocarbon derivatives, placards and labels, parameters of combustion, and spill and leak mitigation. Upon completion, students should be able to demonstrate knowledge of the chemical behavior of hazardous materials.

**FIP 232 – Hydraulics and Water Distribution** 2 2 0 0 3

This course covers the flow of fluids through fire hoses, nozzles, appliances, pumps, standpipes, water mains, and other devices reference in NFPA standard 25. Emphasis is placed on supply and delivery systems, fire flow testing, hydraulic calculations, and other related topics. Upon completion, students should be able to perform hydraulic calculations, conduct water availability tests, and demonstrate knowledge of water distribution systems.

**FIP 240 – Fire Service Supervision** 3 0 0 0 3

This course covers supervisory skills and practices in the fire protection field. Topics include the supervisor's job, supervision skills, the changing work environment, managing change, organizing for results, discipline and grievances, and safety. Upon completion, students should be able to demonstrate an understanding of the roles and responsibilities of effective fire service supervision, meeting elements of NFPA 1021.

**FIP 248 – Fire Service Personnel Administration** 3 0 0 0 3

This course covers the basics of setting up and administering the personnel functions of fire protection organizations referenced in NFPA standard 1021. Emphasis is placed on human resource planning, classification and job analysis, equal opportunity employment, affirmative action, recruitment, retention, development, performance evaluation, and assessment centers. Upon completion, students should be able to demonstrate knowledge of the personnel function as it relates to managing fire protection.

**FIP 256 – Municipal Public Relations** 3 0 0 0 3

This course is a general survey of municipal public relations and their effect on the governmental process referenced in NFPA standard 1035. Topics include principles of public relations, press releases, press conferences, public information officers, image surveys, and the effects of perceived service on fire protection delivery. Upon completion, students should be able to manage public relations functions of organizations which meet elements of NFPA 1021 for Fire Officer I and II.

**FIP 264 – Flame Properties and Materials Rating** 1 4 0 0 3

This course covers the role of interior finishes in fires, smoke obscuration and density, flame spread, pyrolysis, and other related topics referenced in NFPA standard 1001. Emphasis is placed on testing equipment which includes Rack Impingement, Bench Furnace, and the two-foot tunnel. Upon completion, students should be able to understand the operation of the testing equipment and compile a reference notebook.

**FIP 276 – Managing Fire Services** 3 0 0 0 3

This course provides an overview of fire department operative services referenced in NFPA standard 1021. Topics include finance, staffing, equipment, code enforcement, management information, specialized services, legal issues, planning, and other related topics. Upon completion, students should be able to understand concepts and apply fire department management and operations principles.

**FIP 277 – Fire and Social Behavior** 3 0 0 0 3

This course covers fire-related aspects of human behavior, with an emphasis on research and a systems approach to human-behavior analysis. Topics include identification of populations and structures at high risk, evaluation of systems models, and use of computer models to predict human behavior during fires. Upon completion, students should be able to identify and anticipate human behavior in response to various residential, commercial, board-and-care facility, and wildland/rural fire events.

**FRE – French****FRE 111 – Elementary French I** 3 0 0 0 3

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.

**FRE 112 – Elementary French II** 3 0 0 0 3

This course is a continuation of FRE 111 focusing on the fundamental elements of the French language within a cultural context. Emphasis is placed on the progressive development of listening, speaking, reading, and writing skills. Upon completion, students should be able to comprehend and respond with increasing proficiency to spoken and written French and demonstrate further cultural awareness.

**Prerequisites**

Take FRE-111

**GEO – Geography****GEO 111 – World Regional Geography** 3 0 0 0 3

This course introduces the regional concept which emphasizes the spatial association of people and their environment. Emphasis is placed on the physical, cultural, and economic systems that interact to produce the distinct regions of the earth. Upon completion, students should be able to describe variations in physical and cultural features of a region and demonstrate an understanding of their functional relationships.

**GEO 112 – Cultural Geography** 3 0 0 0 3

This course is designed to explore the diversity of human cultures and to describe their shared characteristics. Emphasis is placed on the characteristics, distribution, and complexity of earth's cultural patterns. Upon completion, students should be able to demonstrate an understanding of the differences and similarities in human cultural groups.

**GEO 113 – Economic Geography** 3 0 0 0 3

This course covers the patterns and networks of economic interdependence and how they affect human populations. Emphasis is placed on the economic aspects of the production and distribution of goods and services and their impact on the quality of human life. Upon completion, students should be able to describe different economic systems and demonstrate an understanding of the variables that influence economic development.

**GEO 121 – North Carolina Geography** 3 0 0 0 3

This course is a survey of the physical and cultural landscapes of North Carolina. Topics include physical characteristics of North Carolina, settlement patterns, resource use, and cultural variations. Upon completion, students should be able to demonstrate knowledge of the distinct physical and cultural features of North Carolina.

**GEO 130 – General Physical Geography** 3 0 0 0 3

This course introduces both the basic physical components that help shape the earth and the study of minerals, rocks, and evolution of landforms. Emphasis is placed on the geographic grid, cartography, weather, climate, mineral composition, fluvial processes, and erosion and deposition. Upon completion, students should be able to identify these components and processes and explain how they interact.

## GER – German

### GER 111 – Elementary German I 3 0 0 0 3

This course introduces the fundamental elements of the German language within a cultural context. Emphasis is placed on the development of basic listening, speaking, reading, and writing skills. Upon completion, students should be able to comprehend and respond with grammatical accuracy to spoken and written German and demonstrate cultural awareness.

### GER 112 – Elementary German II 3 0 0 0 3

This course is a continuation of GER 111 focusing on the fundamental elements of the German language within a cultural context. Emphasis is placed on the progressive development of listening, speaking, reading, and writing skills. Upon completion, students should be able to comprehend and respond with increasing proficiency to spoken and written German and demonstrate further cultural awareness.

**Prerequisites**

Take GER-111

## GIS – Geographic Information Systems

### GIS 212 – GIS/GPS Applications 4 4 0 0 6

This course provides experience in operational and management issues in designing and implementing GIS/GPSs for use in planning, management, analysis, and locational decision making. Topics include applications in municipal, industrial, and service sectors and the associated planning, legal, national, and global issues with a project emphasizing the student's specialization. Upon completion, students should be able to design and apply GIS/GPS technologies to solve practical problems.

### GIS 252 – Utilities in GIS 2 2 0 0 3

The student will gain an understanding of utilizing GIS for utilities applications. Topics include the theory and implementation of GIS networks effectively in real world utility scenarios. Upon completion, students should be able to demonstrate an understanding of the fundamentals of utility mapping, including the use of correct terminology and symbology.

## GRD – Graphic Design

### GRD 110 – Typography I 2 2 0 0 3

This course introduces the history and mechanics of type and its application to layout and design. Topics include typographic fundamentals, anatomy, measurements, composition, identification, and terminology. Upon completion, students should be able to demonstrate proficiency in design application, analysis, specification, and creation of typographic elements.

### GRD 113 – History of Graphic Design 3 0 0 0 3

This course covers the history of graphic design and visual communications. Topics include major trends, developments, influences, and directions. Upon completion, students should be able to understand, recognize, and analyze important historical and world-wide cultural influences found in today's marketing of ideas and products.

### GRD 117 – Design Career Exploration 2 0 0 0 2

This course covers opportunities in the graphic design field and employment requirements. Topics include evaluation of career choices, operations, structure of advertising and graphic design businesses, and related business issues. Upon completion, students should be able to demonstrate an understanding of the graphic design field and consider an appropriate personal direction of career specialization.

### GRD 121 – Drawing Fundamentals I 1 3 0 0 2

This course increases observation skills using basic drawing techniques and media in graphic design. Emphasis is placed on developing the use of graphic design principles, media applications, spatial considerations, drawing styles, and approaches. Upon completion, students should be able to show competence and proficiency in finished works.

### GRD 122 – Drawing Fundamentals II 1 3 0 0 2

This course is a continuation of GRD 121. Emphasis is placed on applying a unique style/approach to drawing from life situations and may include rendering human figures in action and repose. Upon completion, students should be able to show drawing competence and proficiency.

**Prerequisites**

Take GRD-121

### GRD 131 – Illustration I 1 3 0 0 2

This course introduces the application of rendering techniques to create illustrations. Emphasis is placed on controlling various media, methods, surfaces, design problems, and the appropriate media selection process. Upon completion, students should be able to produce quality illustrations from conception through finished artwork.

**Prerequisites**

Take One: ART-131, DES-125, or GRD-121

**GRD 132 – Illustration II** 1 3 0 0 2

This course is a continuation of GRD 131. Topics include editorial, product, fashion, and advertising illustrations. Upon completion, students should be able to demonstrate increased proficiency in creating quality illustrations from conceptualization through finished artwork.

**Prerequisites**

Take GRD-131

**GRD 141 – Graphic Design I** 2 4 0 0 4

This course introduces the conceptualization process used in visual problem solving. Emphasis is placed on learning the principles of design and on the manipulation and organization of elements. Upon completion, students should be able to apply design principles and visual elements to projects.

**GRD 142 – Graphic Design II** 2 4 0 0 4

This course covers the application of visual elements and design principles in advertising and graphic design. Topics include creation of various design, such as logos, advertisements, posters, outdoor advertising, and publication design. Upon completion, students should be able to effectively apply design principles and visual elements to projects.

**Prerequisites**

Take One: ART-121, DES-135, or GRD-141.

**GRD 145 – Design Applications I** 0 3 0 0 1

This course introduces visual problem solving. Emphasis is placed on application of design principles. Upon completion, students should be able to produce projects utilizing basic design concepts.

**Corequisites**

Take GRD-141

**GRD 151 – Computer Design Basics** 1 4 0 0 3

This course covers designing and drawing with various types of software applications for advertising and graphic design. Emphasis is placed on creative and imaginative use of space, shapes, value, texture, color, and typography to provide effective solutions to advertising and graphic design problems. Upon completion, students should be able to use the computer as a creative tool.

**GRD 152 – Computer Design Tech I** 1 4 0 0 3

This course covers complex design problems utilizing various design and drawing software applications. Topics include the expressive use of typography, image, and organization to communicate a message. Upon completion, students should be able to use appropriate computer software to professionally present their work.

**Prerequisites**

Take GRD-151

**GRD 156 – Computer Design Apps I** 0 3 0 0 1

This course is designed to provide additional hands-on training with computer software applications. Emphasis is placed on utilizing various computer applications to create and develop simple graphic designs. Upon completion, students should be able to use the computer as a creative tool.

**Corequisites**

Take GRD-151

**GRD 170 – Exhibit Design** 1 4 0 0 3

This course introduces basic studio problems in three-dimensional visual design. Emphasis is placed on the structural elements and organizational principles as applied to mass and space. Upon completion, students should be able to apply three-dimensional design concepts in both exhibit designs and commercial displays.

**Prerequisites**

Take GRD-141

**GRD 230 – Technical Illustration** 1 3 0 0 2

This course introduces technical and industrial illustration techniques. Topics include orthographic, isometric, linear perspective, and exploded views. Upon completion, students should be able to demonstrate competence in various technical rendering techniques.

**Prerequisites**

Take One: ART-131, DES-125, or GRD-121

**GRD 241 – Graphic Design III** 2 4 0 0 4

This course is an advanced exploration of various techniques and media for advertising and graphic design. Emphasis is placed on advanced concepts and solutions to complex and challenging graphic design problems. Upon completion, students should be able to demonstrate competence and professionalism in visual problem solving.

**Prerequisites**

Take One: DES-136 or GRD-142

**GRD 260 – Digital Processes/Theory** 2 0 0 0 2

This course covers technical problems associated with converting, formatting, preparing, reproducing, or outputting digital files for multimedia, print, video, photography, and communication media. Emphasis is placed on research, problem solving, analysis of output specifications, and exploration of current and emerging technologies in core and related industries. Upon completion, students should be able to identify and describe multiple solutions for each problem presented.

**Prerequisites**

Take One: GRD-151 or GRA-151

**GRD 265 – Digital Print Production** 1 4 0 0 3

This course covers preparation of digital files for output and reproduction. Emphasis is placed on output options, separations, color proofing, and cost and design considerations. Upon completion, students should be able to prepare files and select appropriate output methods for design solutions.

**Prerequisites**

Take One: GRD-151 or GRA-151

**GRD 280 – Portfolio Design** 2 4 0 0 4

This course covers the organization and presentation of a design/advertising or graphic art portfolio and appropriate related materials. Emphasis is placed on development and evaluation of the portfolio, design and production of a resume and self-promotional materials, and interview techniques. Upon completion, students should be able to prepare and professionally present an effective portfolio and related self-promotional materials.

**Prerequisites**

Take One Set: Set 1: GRD-142 and GRD-152 Set 2: GRD-142 and GRA-152

**GRD 281 – Design of Advertising** 1 3 0 0 2

This course explores the origins, roles, scope, forms, and development of advertising. Emphasis is placed on advertising development from idea through production and the interrelationship of marketing to types of advertising, media, and organizational structure. Upon completion, students should be able to produce advertising for various media and demonstrate an understanding of the complexities and relationships involved in advertising design.

**GRD 282 – Advertising Copywriting** 1 2 0 0 2

This course covers copywriting for print, electronic, and broadcast advertising and promotion. Topics include advertising strategies, proposals, headlines, slogans, and text copy for various types of advertising. Upon completion, students should be able to write and articulate advertising proposals and understand the ethical and regulatory environment for advertising.

**Prerequisites**

Take One: ENG-110 or ENG-111

# HBI – Healthcare Business Informatics

**HBI 110 – Issues and Trends in Healthcare Business Informatics** 3 0 0 0 3

This course is a survey of current and emerging technology applications and data standards in the healthcare industry. Topics include the history, implementation, use, management, and impact of information technology in healthcare settings. Upon completion, students should have an understanding of the current trends and issues in healthcare informatics.

**HBI 113 – Survey of Medical Insurance** 3 0 0 0 3

This course is a survey of the healthcare insurance system. Emphasis is placed on the foundation necessary for understanding the healthcare delivery system, terminology and practices of healthcare insurance, and provider reimbursement. Upon completion, students should have an understanding of healthcare insurance and how outcomes are addressed through healthcare informatics.

**HBI 210 – Introduction to Health Information Networking** 2 3 0 0 3

This course introduces health information networking. Emphasis is on security and privacy in healthcare, EHR/EMR implementations, designing, securing, and troubleshooting a network to support a medical group. Upon completion, students should be able to design and support healthcare network implementations.

**Prerequisites**

**HBI 230 – Infrastructure and Application Support in Healthcare** 2 3 0 0 3

This course covers implementing, deploying, and supporting IT systems in EHR/EMR environments. Emphasis on regulatory requirements, business practices, installation and configuration of hardware/software, troubleshooting, mobile technology, security, and end user training. Upon completion, students should be able to successfully implement, deploy and support IT systems in EHR/EMR environments in healthcare settings.

**HBI 250 – Data Management and Utilization** 2 2 0 0 3

This course covers the management and usage of data in healthcare settings according to current practices in healthcare informatics. Topics include data warehousing, data integrity, data security, data mining, and report generating in healthcare settings. Upon completion, students should be able to demonstrate an understanding of using healthcare data to support reporting and decision making in healthcare settings.

**Prerequisites**

Take One: DBA-110, DBA-120, or DBA-210

**HBI 289 – Healthcare Bus Informatics Project** 1 4 0 0 3

This course provides an opportunity to complete a significant healthcare business informatics project with minimal instructor assistance. Emphasis is placed on written and oral communication skills, project definition, documentation, installation, testing, presentation, and user training. Upon completion, students should be able to complete a healthcare informatics project from the definition phase through implementation.

**Prerequisites**

Take HBI-250

**HEA – Health**

**HEA 110 – Personal Health/Wellness** 3 0 0 0 3

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.

This course is a Universal General Education Transfer Component course that is guaranteed to transfer for general education equivalency credit to each of the 16 institutions in the University of North Carolina system.

**HIS – History**

**HIS 111 – World Civilizations I** 3 0 0 0 3

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.

This course is a Universal General Education Transfer Component course that is guaranteed to transfer for general education equivalency credit to each of the 16 institutions in the University of North Carolina system.

**Prerequisites**

Take 1 group; # Take RED-090; # Take ENG-111; # Take ENG-095; # Take DRE-098;

**HIS 112 – World Civilizations II** 3 0 0 0 3

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.

This course is a Universal General Education Transfer Component course that is guaranteed to transfer for general education equivalency credit to each of the 16 institutions in the University of North Carolina system.

**Prerequisites**

Take 1 group; # Take RED-090; # Take ENG-111; # Take ENG-095; # Take DRE-098;

**HIS 115 – Intro to Global History** 3 0 0 0 3

This course introduces the study of global history. Emphasis is placed on topics such as colonialism, industrialism, and nationalism. Upon completion, students should be able to analyze significant global historical issues.

**HIS 121 – Western Civilization I** 3 0 0 0 3

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.

**Prerequisites**

Take 1 group; # Take RED-090; # Take ENG-111; # Take ENG-095; # Take DRE-098;

**HIS 122 – Western Civilization II** 3 0 0 0 3

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.

**Prerequisites**

Take 1 group; # Take RED-090; # Take ENG-111; # Take ENG-095; # Take DRE-098;

**HIS 131 – American History I** 3 0 0 0 3

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.

This course is a Universal General Education Transfer Component course that is guaranteed to transfer for general education equivalency credit to each of the 16 institutions in the University of North Carolina system.

**Prerequisites**

Take 1 group; # Take RED-090; # Take ENG-111; # Take ENG-095; # Take DRE-098;

**HIS 132 – American History II** 3 0 0 0 3

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.

This course is a Universal General Education Transfer Component course that is guaranteed to transfer for general education equivalency credit to each of the 16 institutions in the University of North Carolina system.

**Prerequisites**

Take 1 group; # Take RED-090; # Take ENG-111; # Take ENG-095; # Take DRE-098(S23643);

**HIS 162 – Women and History** 3 0 0 0 3

This course surveys the experience of women in historical perspective. Topics include the experiences and contributions of women in culture, politics, economics, science, and religion. Upon completion, students should be able to analyze significant political, socioeconomic, and cultural contributions of women in history.

**HIS 163 – The World Since 1945** 3 0 0 0 3

This course surveys world developments since the end of World War II. Topics include the Cold War, nationalism, colonialism, the Third World, the arms race, and global capitalism and regionalism. Upon completion, students should be able to analyze significant political, socioeconomic, and cultural developments in the world since 1945.

**Prerequisites**

Take 1 group; # Take RED-090; # Take ENG-111; # Take ENG-095; # Take DRE-098;

**HIS 221 – African-American History** 3 0 0 0 3

This course covers African-American history from the Colonial period to the present. Topics include African origins, the slave trade, the Civil War, Reconstruction, the Jim Crow era, the civil rights movement, and contributions of African Americans. Upon completion, students should be able to analyze significant political, socioeconomic, and cultural developments in the history of African Americans.

**This course requires intensive reading and writing.**

**Prerequisites**

Take ENG-111;

**HIS 226 – The Civil War** 3 0 0 0 3

This course examines the social, political, economic, and ideological forces that led to the Civil War and Reconstruction. Topics include regional conflicts and sectionalism, dissolution of the Union, military campaigns, and the War's socioeconomic impact, aftermath, and consequences. Upon completion, students should be able to analyze significant political, socioeconomic, and cultural developments in the United States during the era of the Civil War.

**Prerequisites**

Take 1 group; # Take RED-090; # Take ENG-111; # Take ENG-095; # Take DRE-098;

**HIS 236 – North Carolina History** 3 0 0 0 3

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.

**Prerequisites**

Take 1 group; # Take RED-090; # Take ENG-111; # Take ENG-095; # Take DRE-098;

**HIS 260 – History of Africa** 3 0 0 0 3

This course surveys the history of Africa from pre-history to the present. Emphasis is placed on the evolution of social, political, economic, and governmental structures in Africa. Upon completion, students should be able to analyze significant political, socioeconomic, and cultural developments in Africa.

## HIT – Health Information Technology

### HIT 110 – Fundamentals of Health Information Management 3 0 0 0 3

This course introduces Health Information Management (HIM) and its role in healthcare delivery systems. Topics include standards, regulations and initiatives; payment and reimbursement systems, healthcare providers and disciplines; and electronic health records (EHRs). Upon completion, students should be able to demonstrate an understanding of health information management and healthcare organizations, professions and trends.

### HIT 112 – Health Law and Ethics 3 0 0 0 3

This course covers legislative and regulatory processes, legal terminology, and professional-related and practice-related ethical issues. Topics include confidentiality; privacy and security policies, procedures and monitoring; release of information policies and procedures; and professional-related and practice-related ethical issues. Upon completion, students should be able to apply policies and procedures for access and disclosure of Protected Health Information and apply and promote ethical standards.

### HIT 114 – Health Data Systems and Standards 2 3 0 0 3

This course covers concepts and techniques for managing and maintaining manual and electronic health records (EHR). Topics include structure and use of health information including data collection and analysis, data sources/sets, archival systems, and quality and integrity of healthcare data. Upon completion, students should be able to monitor and apply system-wide clinical documentation guidelines and comply with regulatory standards.

## HMT – Healthcare Management

### HMT 110 – Intro to Healthcare Management 3 0 0 0 3

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.

## HSE – Human Services

### HSE 245 – Stress Management 2 2 0 0 3

This course covers stressors and techniques for stress management. Topics include anger, assertiveness, breathing, change, coping skills, family, time management, meditation, guided imagery, and journaling. Upon completion, students should be able to identify areas of stress and the skills and management techniques for dealing with stressors.

## HUM – Humanities

### HUM 110 – Technology and Society 3 0 0 0 3

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.

### HUM 115 – Critical Thinking 3 0 0 0 3

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.

#### Prerequisites

Take DRE-098

### HUM 120 – Cultural Studies 3 0 0 0 3

This course introduces the distinctive features of a particular culture. Topics include art, history, music, literature, politics, philosophy, and religion. Upon completion, students should be able to appreciate the unique character of the study culture.

### HUM 121 – The Nature of America 3 0 0 0 3

This course provides an interdisciplinary survey of the American cultural, social, and political experience. Emphasis is placed on the multicultural character of American society, distinctive qualities of various regions, and the American political system. Upon completion, students should be able to analyze significant cultural, social, and political aspects of American life.

**HUM 122 – Southern Culture** 3 0 0 0 3

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.

**HUM 130 – Myth in Human Culture** 3 0 0 0 3

This course provides an in-depth study of myths and legends. Topics include the varied sources of myths and their influence on the individual and society within diverse cultural contexts. Upon completion, students should be able to demonstrate a general familiarity with myths and a broad-based understanding of the influence of myths and legends on modern culture.

**HUM 150 – American Womens Studies** 3 0 0 0 3

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.

**HUM 160 – Introduction to Film** 2 2 0 0 3

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.

**HUM 161 – Advanced Film Studies** 2 2 0 0 3

This course provides an advanced study of film art and production, building on skills learned in HUM 160. Topics include advanced film production techniques, film genres, examination of master directors' styles, and the relation of film to culture. Upon completion, students should be able to recognize and critically analyze advanced elements of film production.

**Prerequisites**

Take HUM-160

**HUM 170 – The Holocaust** 3 0 0 0 3

This course provides a survey of the destruction of European Jewry by the Nazis during World War II. Topics include the anti-Semitic ideology, bureaucratic structures, and varying conditions of European occupation and domination under the Third Reich. Upon completion, students should be able to demonstrate an understanding of the historical, social, religious, political, and economic factors which cumulatively resulted in the Holocaust.

**HUM 211 – Humanities I** 3 0 0 0 3

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.

**Prerequisites**

Take ENG-111

**HUM 212 – Humanities II** 3 0 0 0 3

This course introduces the humanities as a record in literature, music, art, history, religion, and philosophy of humankind's answers to the fundamental questions of existence. Emphasis is placed on the interconnectedness of various aspects of cultures from early modern times to the present. Upon completion, students should be able to identify significant figures and cultural contributions of the periods studied.

**Prerequisites**

Take ENG-111

**INT – International Business**

**INT 110 – International Business** 3 0 0 0 3

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.

**INT 115 – Global Communication** 3 0 0 0 3

This course introduces principles and techniques basic to intercultural business communications. Topics include selected cultural values and customs, verbal and non-verbal communication skills, and global etiquette. Upon completion students should be able to demonstrate beginning skills in effective verbal and non-verbal intercultural communications.

**INT 210 – International Trade** 3 0 0 0 3

This course covers international business trade practices and foreign market research. Emphasis is placed on current trends of US trade practices in foreign countries and how to engage in international trade and acquire foreign marketing information. Upon completion, students should be able to formulate an overall product policy for the international marketplace.

**INT 220 – International Economics** 3 0 0 0 3

This course introduces the forces and criteria for the development of a new international economic order. Emphasis is placed on balance of payments, foreign exchange rates and their determination, International Monetary System, and arguments for and against free trade and protectionism. Upon completion, students should be able to describe economic principles and concepts of international trade.

**Prerequisites**

Take One: ECO-151, ECO-251, or ECO-252

**INT 230 – International Law** 3 0 0 0 3

This course is designed to develop an understanding of the different theories on international law and their effect on international trade. Emphasis is placed on concepts of contracts, international transactions, major organizations in international trade, establishment of treaties, economic areas, and US laws affecting international trade. Upon completion, students should be able to apply theories and concepts to international trade and transactions.

**Prerequisites**

Take BUS-115

## ISC – Industrial Science

**ISC 112 – Industrial Safety** 2 0 0 0 2

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.

A fundamental study of accident costs and causes, safety records, accident investigation, development of safeguards, job safety analysis, facility inspection, and safety communication will be covered.

**ISC 113 – Industrial Specifications** 1 0 0 0 1

This course introduces industrial specifications. Emphasis is placed on using machinist reference materials. Upon completion, students should be able to use and interpret charts and data found in reference materials.

**ISC 115 – Construction Safety** 2 0 0 0 2

This course introduces the basic concepts of construction site safety. Topics include ladders, lifting, lock-out/tag-out, personal protective devices, scaffolds, and above/below ground work based on OSHA regulations. Upon completion, students should be able to demonstrate knowledge of applicable safety regulations and safely participate in construction projects.

**ISC 121 – Environmental Health and Safety** 3 0 0 0 3

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.

**ISC 132 – Manufacturing Quality Control** 2 3 0 0 3

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.

**ISC 135 – Principles of Industrial Management** 4 0 0 0 4

This course covers the managerial principles and practices required for organizations to succeed in modern industry, including quality and productivity improvement. Topics include the functions and roles of all levels of the management, organization design, planning and control of manufacturing operation, managing conflict, group dynamics, and problem solving skills. Upon completion, students should be able to demonstrate an understanding of management principles and integrate these principles into job situations.

**ISC 136 – Productivity Analysis I** 2 3 0 0 3

This course covers modern methods of measuring, analyzing, and improving productivity. Topics include methods analysis, standardized practices, process analysis, and human factors. Upon completion, students should be able to apply productivity improvement techniques.

**ISC 214 – Job Analysis/Wages and Salary** 2 3 0 0 3

This course covers job analysis and evaluation as a basis for determining equitable wages and salaries. Topics include selection and definition of job factors, relative values of factors, preparation of job specifications and descriptions, and determination of wage/salary structure. Upon completion, students should be able to prepare job specifications and descriptions, evaluate jobs by four commonly accepted methods, and calculate costs of wage curves.

**ISC 220 – Lean Manufacturing** 2 2 0 0 3

This course introduces students to the concept of lean manufacturing as a means of waste reduction. Topics include the examination of manufacturing operations and the incorporation of lean techniques to reduce waste, cost, time, and materials in manufacturing processes. Upon completion, students should be able to demonstrate an understanding of lean manufacturing systems and how they benefit the environment and business.

**ISC 225 – Facility Layout** 3 2 0 0 4

This course provides a practical study of facility planning with emphasis on a structured approach to solving layout problems. Emphasis is placed on investigating and designing an effective facility layout. Upon completion, students should be able to design a basic work area indicating effective use of allowable resources.

**ISC 237 – Quality Management** 2 3 0 0 3

This course covers the process by which successful manufacturing organizations achieve customer satisfaction in all processes in the organization. Topics include quality models and approaches, such as MBNQA, ISO 9000, benchmarking, and Deming's 14 Points, and the incorporation of SPC improvement techniques. Upon completion, students should be able to integrate SPC techniques with successful management practices for a comprehensive understanding of continuous quality improvement.

**ISC 243 – Prod and Operations Management I** 2 3 0 0 3

This course introduces concepts used to analyze and solve productivity and operational problems. Topics include operations strategy, forecasting, resource allocation, and materials management. Upon completion, students should be able to recognize, analyze, and solve a variety of productivity and operational problems.

**ISC 255 – Engineering Economy** 2 2 0 0 3

This course covers the process of economic evaluation of manufacturing industrial alternatives such as equipment selection, replacement studies, and cost reduction proposals. Topics include discounted cash flows, time value of money, income tax considerations, internal rates of return, and comparison of alternatives using computer programs. Upon completion, students should be able to analyze complex manufacturing alternatives based on engineering economy principles.

**JOU – Journalism**

**JOU 110 – Introduction to Journalism** 3 0 0 0 3

This course presents a study of journalistic news, feature, and sports writing. Emphasis is placed on basic news writing techniques and on related legal and ethical issues. Upon completion, students should be able to gather, write, and edit news, feature, and sports articles.

**Prerequisites**

Take ENG-111;

**JOU 216 – Writing for Mass Media** 2 2 0 0 3

This course is an introduction to news writing for newspapers and other print media including the techniques of news gathering, reporting, and interviewing. Emphasis is placed on basic methods of gathering information, conducting interviews, organizing a story, writing leads, writing clear, concise copy, and upon developing research skills. Upon completion, students should be able to write clear, concise, accurate, complete, balanced and readable news stories according to guidelines set by industry standards.

**JOU 217 – Feature/Editorial Writing** 2 2 0 0 3

This course covers the basics of persuasive writing for community newspapers and other print media. Emphasis is placed on writing features, reviews, and editorials including audience analysis, appropriate language, effective supporting details, completeness, and accuracy. Upon completion, students should be able to write effective feature stories, reviews, and editorials.

**Prerequisites**

Take ENG-111

## MAC – Machining

**MAC 111 – Machining Technology I** 2 12 0 0 6

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.

**Corequisites**

MAC-114

**MAC 111AB – Machining Technology I-Part A** 1 6 0 0 3

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.

**Corequisites**

MAC-114

**MAC 111BB – Machining Technology I-Part B** 1 6 0 0 3

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.

A TI-84 Plus graphing calculator is required of all students enrolled in this course.

**Corequisites**

MAC-114

**Prerequisites**

Take MAC-111AB

**MAC 112 – Machining Technology II** 2 12 0 0 6

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.

**Prerequisites**

Take MAC-111;

**MAC 112AB – Machining Technology II** 1 6 0 0 3

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.

**Prerequisites**

Take MAC-111;

**MAC 112BB – Machining Technology II** 1 6 0 0 3

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.

**Prerequisites**

Take MAC-111 MAC-112AB

**MAC 114 – Introduction to Metrology** 2 0 0 0 2

This course introduces the care and use of precision measuring instruments. Emphasis is placed on the inspection of machine parts and use of a wide variety of measuring instruments. Upon completion, students should be able to demonstrate the correct use of measuring instruments.

**MAC 122 – CNC Turning** 1 3 0 0 2

This course introduces the programming, setup, and operation of CNC turning centers. Topics include programming formats, control functions, program editing, part production, and inspection. Upon completion, students should be able to manufacture simple parts using CNC turning centers.

**Prerequisites**

Take 2 groups; # Take 3 credits; From courses MAC-111 MEC-111; # Take 2 credits; From courses CTS-060 CTS-080;

**MAC 124 – CNC Milling** 1 3 0 0 2

This course introduces the manual programming, setup, and operation of CNC machining centers. Topics include programming formats, control functions, program editing, part production, and inspection. Upon completion, students should be able to manufacture simple parts using CNC machining centers.

**Prerequisites**

Take 2 groups; # Take 3 credits; From courses MAC-111 MEC-111; # Take 2 credits; From courses CTS-060 CTS-080;

**MAC 143 – Machining Applications III** 2 6 0 0 4

This course provides instruction in the field of advanced machining. Emphasis is placed on creating complex components, close-tolerance machining, precise measurement, and proper equipment usage. Upon completion, students should be able to demonstrate the ability to produce an accurately machined component with a quality finish using the proper machining process.

This course is a Universal General Education Transfer Component course that is guaranteed to transfer for general education equivalency credit to each of the 16 institutions in the University of North Carolina system. A TI-84 Plus graphing calculator is required of all students enrolled in this course. Online sections require students to take all tests in an approved college testing center.

**MAC 151 – Machining Calculations** 1 2 0 0 2

This course introduces basic calculations as they relate to machining occupations. Emphasis is placed on basic calculations and their applications in the machine shop. Upon completion, students should be able to perform basic shop calculations.

**MAC 152 – Advanced Machining Calculations** 1 2 0 0 2

This course combines mathematical functions with practical machine shop applications and problems. Emphasis is placed on gear ratios, lead screws, indexing problems, and their applications in the machine shop. Upon completion, students should be able to calculate solutions to machining problems.

**Prerequisites**

Take MAC-151.

**MAC 222 – Advanced CNC Turning** 1 3 0 0 2

This course covers advanced methods in setup and operation of CNC turning centers. Emphasis is placed on programming and production of complex parts. Upon completion, students should be able to demonstrate skills in programming, operations, and setup of CNC turning centers.

**Prerequisites**

Take MAC-122;

**MAC 224 – Advanced CNC Milling** 1 3 0 0 2

This course covers advanced methods in setup and operation of CNC machining centers. Emphasis is placed on programming and production of complex parts. Upon completion, students should be able to demonstrate skills in programming, operations, and setup of CNC machining centers.

**Prerequisites**

Take MAC-124;

**MAC 229 – CNC Programming** 2 0 0 0 2

This course provides concentrated study in advanced programming techniques for working with modern CNC machine tools. Topics include custom macros and subroutines, canned cycles, and automatic machining cycles currently employed by the machine tool industry. Upon completion, students should be able to program advanced CNC functions while conserving machine memory.

**Prerequisites**

Take MAC-122 MAC-124;

**MAC 233 – Appl in CNC Machining Appl in CNC Machining** 2 12 0 0 6

This capstone course provides students the opportunity to apply skills learned throughout the curriculum. Emphasis is placed on production of parts and assemblies using modern CNC machine tools. Upon completion, students should be able to manufacture complex parts using a variety of CNC machine tools.

**Corequisites**

MAC-248

**Prerequisites**

Take MAC-113 MAC-222 MAC-224 MEC-232;

**MAC 234 – Advanced Multi-Axis Machining** 2 3 0 0 3

This course includes multi-axis machining using machining centers with multi-axis capabilities. Emphasis is placed on generation of machining center input with a CAM system and setup of pallet changer and rotary system for multi-axis machining fixtures. Upon completion, students should be able to convert CAD to output for multi-axis machining centers, including tooling, setup, and debugging processes.

**MAC 248 – Production Procedures** 1 2 0 0 2

This course covers product planning and control and scheduling and routing of operations. Topics include cost-effective production methods, dimensional and statistical quality control, and the tooling and machines required for production. Upon completion, students should be able to plan, set up, and produce cost-effective quality machined parts.

**Prerequisites**

Take MAC-122 MAC-124;

## MAT – Mathematics

**MAT 001P – Math Skills Support for Precalculus** 0 0 0 0 1

This course provides opportunities for students to build a stronger foundation for success in their corequisite math course by obtaining skills through a variety of instructional strategies. Emphasis is placed on foundational skills as well as concepts, skills, vocabulary and definitions necessary to master student learning outcomes of the co-requisite math course. Upon completion, students should be able to apply mathematical concepts and critical thinking skills to solve problems relevant to the student's co-requisite math course.

This course is a mandatory corequisite for students taking MAT 171 who exempted placement testing with a Multiple Measures Waiver and had below a 3.0 high school GPA; it is an optional corequisite to MAT 171 for all other students.

A TI-84 Plus graphic calculator is required of all students in this course.

**Corequisites**

MAT-171

**MAT 001S – Math Skills Support for Statistics** 0 0 0 0 1

This course provides opportunities for students to build a stronger foundation for success in their corequisite math course by obtaining skills through a variety of instructional strategies. Emphasis is placed on foundational skills as well as concepts, skills, vocabulary and definitions necessary to master student learning outcomes of the co-requisite math course. Upon completion, students should be able to apply mathematical concepts and critical thinking skills to solve problems relevant to the student's co-requisite math course.

This course is a mandatory corequisite for students taking MAT 152 who exempted placement testing with a Multiple Measures Waiver and had below a 3.0 high school GPA; it is an optional corequisite to MAT 152 for all other students.

A TI-84 Plus graphic calculator is required of all students in this course.

**Corequisites**

MAT-152

**MAT 050 – Basic Math Skills** 3 2 0 0 4

This course is designed to strengthen basic math skills. Topics include properties, rounding, estimating, comparing, converting, and computing whole numbers, fractions, and decimals. Upon completion, students should be able to perform basic computations and solve relevant mathematical problems.

A TI-84 Plus graphic calculator is required of all students in this course.

**MAT 110 – Mathematical Measurement and Literacy** 2 2 0 0 3

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.

A TI-84 Plus graphing calculator is required of all students enrolled in this course. Online sections require students to take all tests in an approved college testing center.

**Prerequisites**

Take All: DMA-010, DMA-020, and DMA-030

**MAT 121 – Algebra/Trigonometry I** 2 2 0 0 3

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.

A TI-84 Plus graphing calculator is required of all students enrolled in this course.

**Prerequisites**

Take All: DMA-010, DMA-020, DMA-030, DMA-040, DMA-050, and DMA-060

**MAT 122 – Algebra/Trigonometry II** 2 2 0 0 3

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.

A TI-84 Plus graphing calculator is required of all students enrolled in this course.

**Prerequisites**

Take MAT-121

**MAT 143 – Quantitative Literacy** 2 2 0 0 3

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.

A TI-84 Plus graphing calculator is required of all students enrolled in this course. Online sections require students to take all tests in an approved college testing center.

This course is a Universal General Education Transfer Component course that is guaranteed to transfer for general education equivalency credit to each of the 16 institutions in the University of North Carolina system. This course will not be taught at RCCC until Fall 2015.

**Prerequisites**

Take All: DMA-010, DMA-020, DMA-030, DMA-040, DMA-050, and DRE-098

**MAT 152 – Statistical Methods I** 3 2 0 0 4

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.

This course is a Universal General Education Transfer Component course that is guaranteed to transfer for general education equivalency credit to each of the 16 institutions in the University of North Carolina system. A TI-84 Plus graphing calculator is required of all students enrolled in this course. Online sections require students to take all tests in an approved college testing center.

**Corequisites**

MAT-001S (mandatory for students who exempted placement testing with a Multiple Measures Waiver and had below a 3.0 high school GPA, but is optional for other students)

**Prerequisites**

Take All: DMA-010, DMA-020, DMA-030, DMA-040, DMA-050, and DRE-098

**MAT 171 – Precalculus Algebra** 3 2 0 0 4

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.

This course is a Universal General Education Transfer Component course that is guaranteed to transfer for general education equivalency credit to each of the 16 institutions in the University of North Carolina system. A TI-84 graphing calculator is required of all students enrolled in this course. Online sections require students to take all tests in an approved college testing center.

**Corequisites**

MAT-001P (mandatory for students who exempted placement testing with a Multiple Measures Waiver and had below a 3.0 high school GPA, but is optional for other students)

**Prerequisites**

Take One Set: Set 1: DMA-010, DMA-020, DMA-030, DMA-040, DMA-050, DMA-060, DMA-070, and DMA-080 Set 2: DMA-010, DMA-020, DMA-030, DMA-040, DMA-050, and DMA-06 Set 3: MAT-121

**MAT 172 – Precalculus Trigonometry** 3 2 0 0 4

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.

This course is a Universal General Education Transfer Component course that is guaranteed to transfer for general education equivalency credit to each of the 16 institutions in the University of North Carolina system. A TI-84 Plus graphing calculator is required of all students enrolled in this course. Online sections require students to take all tests in an approved college testing center.

**Prerequisites**

Take MAT-171

**MAT 223 – Applied Calculus** 2 2 0 0 3

This course provides an introduction to the calculus concepts of differentiation and integration by way of application and is designed for engineering technology students. Topics include limits, slope, derivatives, related rates, areas, integrals, and applications. Upon completion, students should be able to demonstrate an understanding of the use of calculus and technology to solve problems and to analyze and communicate results.

**Prerequisites**

Take MAT-122

**MAT 263 – Brief Calculus** 3 2 0 0 4

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 is a Universal General Education Transfer Component course that is guaranteed to transfer for general education equivalency credit to each of the 16 institutions in the University of North Carolina system. A TI-84 Plus graphing calculator is required of all students enrolled in this course.

**Prerequisites**

Take MAT-171

**MAT 271 – Calculus I** 3 2 0 0 4

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.

This course is a Universal General Education Transfer Component course that is guaranteed to transfer for general education equivalency credit to each of the 16 institutions in the University of North Carolina system. A TI-84 Plus graphing calculator is required of all students enrolled in this course.

**Prerequisites**

Take: MAT-172

**MAT 272 – Calculus II** 3 2 0 0 4

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.

A TI-84 Plus graphing calculator is required of all students enrolled in this course.

**Prerequisites**

Take MAT-271

**MAT 273 – Calculus III** 3 2 0 0 4

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.

A TI-84 Plus graphing calculator is required of all students enrolled in this course.

**Prerequisites**

Take MAT-272

## MEC – Mechanical

### MEC 110 – Introduction to CAD/CAM 1 2 0 0 2

This course introduces CAD/CAM. Emphasis is placed on transferring part geometry from CAD to CAM for the development of a CNC-ready program. Upon completion, students should be able to use CAD/CAM software to produce a CNC program.

**Prerequisites**

Take CTS-060 or CTS-080;

### MEC 111 – Machine Processes I 1 4 0 0 3

This course introduces shop safety, hand tools, machine processes, measuring instruments, and the operation of machine shop equipment. Topics include use and care of tools, safety, measuring tools, and the basic setup and operation of common machine tools. Upon completion, students should be able to manufacture simple parts to specified tolerance.

### MEC 142 – Physical Metallurgy 1 2 0 0 2

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.

### MEC 145 – Manufacturing Materials I 2 3 0 0 3

This course introduces a variety of manufacturing materials and common processing techniques. Emphasis is placed on the processing, testing, and application of materials such as wood, metals, plastics, ceramics, and composites. Upon completion, students should be able to demonstrate an understanding of fundamental engineering applications for a variety of materials, including their process capabilities and limitations.

### MEC 231 – Computer-Aided Manufacturing I 1 4 0 0 3

This course introduces computer-aided design/manufacturing (CAD/CAM) applications and concepts. Topics include software, programming, data transfer and verification, and equipment setup. Upon completion, students should be able to produce parts using CAD/CAM applications.

**Prerequisites**

Take MEC-110;

### MEC 232 – Computer-Aided Manufacturing II 1 4 0 0 3

This course provides an in-depth study of CAM applications and concepts. Emphasis is placed on the manufacturing of complex parts using computer-aided manufacturing software. Upon completion, students should be able to manufacture complex parts using CAM software.

**Prerequisites**

Take MEC-231

### MEC 265 – Fluid Mechanics 2 2 0 0 3

This course covers the physical behavior of fluids and fluid systems. Topics include fluid statics and dynamics, laminar and turbulent flow, Bernoulli's Equation, components, applications, and other related topics. Upon completion, students should be able to apply fluid power principles to practical applications.

### MEC 275 – Engineering Mechanisms 2 2 0 0 3

This course covers plane motion and devices used to generate plane motion. Topics include analysis of displacement, velocity, acceleration, gears, cams, and other mechanical systems. Upon completion, students should be able to graphically and mathematically analyze a plane motion system.

**Prerequisites**

Take One: PHY-131, PHY-151, or PHY-251

## MED – Medical Assisting

### MED 116 – Intro to Anatomy and Physiology 3 2 0 0 4

This course introduces basic anatomy and physiology. Emphasis is placed on the relationship between body structure and function and the procedures common to health care. Upon completion, students should be able to identify body system components and functions relating this knowledge to the delivery of health care.

### MED 130 – Admin Office Proc I 1 2 0 0 2

This course introduces the vocabulary, abbreviations, and symbols used in the language of medicine. Emphasis is placed on building medical terms using prefixes, suffixes, and word roots. Upon completion, students should be able to pronounce, spell, and define accepted medical terms.

## MKT – Marketing and Retailing

### MKT 120 – Principles of Marketing 3 0 0 0 3

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.

**MKT 122 – Visual Merchandising** 3 0 0 0 3

This course introduces basic layout design and commercial display in retail and service organizations. Topics include an analysis of display as a visual merchandising medium and an examination of the principles and applications of display and design. Upon completion, students should be able to plan, build, and evaluate designs and displays.

**MKT 123 – Fundamentals of Selling** 3 0 0 0 3

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.

**MKT 125 – Buying and Merchandising** 3 0 0 0 3

This course includes an analysis of the organization for buying-what, when and how to buy-and the principles of effective inventory and stock control. Topics include organization for buying, analysis of buyers' responsibilities, pricing, inventory control, planning, cost effectiveness, and vendor relationships. Upon completion, students should be able to demonstrate an understanding of the concepts covered through application.

**MKT 220 – Advertising and Sales Promotion** 3 0 0 0 3

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.

**MKT 221 – Consumer Behavior** 3 0 0 0 3

This course is designed to describe consumer behavior as applied to the exchange processes involved in acquiring, consuming, and disposing of goods and services. Topics include an analysis of basic and environmental determinants of consumer behavior with emphasis on the decision-making process. Upon completion, students should be able to analyze concepts related to the study of the individual consumer.

**MKT 223 – Customer Service** 3 0 0 0 3

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.

**MKT 224 – International Marketing** 3 0 0 0 3

This course covers the basic concepts of international marketing activity and theory. Topics include product promotion, placement, and pricing strategies in the international marketing environment. Upon completion, students should be able to demonstrate a basic understanding of the concepts covered.

**MKT 225 – Marketing Research** 3 0 0 0 3

This course provides information for decision making by providing guidance in developing, analyzing, and using data. Emphasis is placed on marketing research as a tool in decision making. Upon completion, students should be able to design and conduct a marketing research project and interpret the results.

**Prerequisites**

Take MKT-120

**MKT 226 – Retail Applications** 3 0 0 0 3

This course is designed to develop occupational competence through participation in case studies, group work, and simulations. Emphasis is placed on all aspects of store ownership and operation, including securing financial backing and a sufficient market share. Upon completion, students should be able to demonstrate an understanding of concepts covered through application. This course is a unique requirement of the Marketing and Retailing concentration in the Business Administration program.

**MKT 227 – Marketing Applications** 3 0 0 0 3

This course extends the study of diverse marketing strategies. Emphasis is placed on case studies and small-group projects involving research or planning. Upon completion, students should be able to effectively participate in the formulation of a marketing strategy.

**MKT 232 – Social Media Marketing** 3 2 0 0 4

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.

# MSM – Motorsports Management

## MSM 110 – Intro to Motorsports Mgmt 3 0 0 0 3

This course provides a survey of the motorsports industry. Topics include history and scope of motorsports, sanctioning bodies, types and characteristics of vehicles, related businesses, job opportunities, and economics of the industry. Upon completion, students should be able to demonstrate a general knowledge of the motorsports industry and evaluate career choices and direction.

## MSM 112 – Engine/Drivetrain Fundamentals 1 2 0 0 2

This course introduces the principles of internal combustion engines and drivetrains. Topics include types of engines used in motorsports, basic physics of engine operation, terminology related to engines/drivetrains, tools/equipment, and functions of components and accessories. Upon completion, students should be able to identify basic parts of engines/drivetrains, identify shop tools/equipment, and explain how power is generated, transmitted, and controlled.

## MSM 210 – Motorsports Marketing 3 0 0 0 3

This course introduces principles and problems of marketing goods and services especially related to the motorsports industry. Topics include promotion, placement, and pricing strategies for motorsports products and services; importance/significance of media on product image; and the human relations element in marketing. Upon completion, students should be able to develop a marketing and media plan for a motorsports product or service.

## MSM 212 – Chassis Handling Fundamentals 2 2 0 0 3

This course introduces chassis design/handling features for super speedways, short tracks, and road courses. Topics include spring rates, caster/camber settings, aerodynamics, tire construction, tire pressure, stagger, corner and cross weights, chassis flex, steering geometry, and effects of track design on chassis handling and tire wear. Upon completion, students should be able to demonstrate a basic understanding of chassis design and the critical factors involved in chassis set-ups.

## MSM 214 – Fabrication Fundamentals 1 2 0 0 2

This course introduces the basic elements of race vehicle fabrication. Topics include chassis design (driver safety, "crush" zones, energy absorption, flex); selection of materials; material forming; and fundamentals of mig, tig, and arc welding. Upon completion, students should be able to demonstrate basic knowledge of fabrication and be able to perform elementary fabrication procedures.

## MSM 216 – Organization Mobility 2 0 0 0 2

This course covers the processes and procedures involved in moving complex operations from one location to another in a short time span. Topics include budgeting/coordination of transport/housing/ subsistence of personnel; transport of vehicles/equipment or products (including adherence to DOT regulations); facility acquisition; and cost accounting. Upon completion, students should be able to plan and execute a mock both-way move of a complex operation.

## MSM 218 – Safety/Environment 2 0 0 0 2

This course covers safety and environmental information related to motorsports management. Topics include local, state, and federal regulations as applied to workplace safety, handling/disposal of certain materials, safe transport of products/vehicles, and processing of required paperwork. Upon completion, students should be able to identify the source and describe general regulations pertaining to safety/environment related to motorsports.

## MSM 220 – Advanced Chassis Analysis 1 2 0 0 2

This course introduces students to the principles of static and dynamic chassis calculations. Topics include basic understanding of the building and testing of shocks, basic applications of dynamic weight transfer, and use of software programs for chassis setups. Upon completion, students should be able to explain the effect and/or reaction of certain suspension and chassis changes using advanced technology.

### Prerequisites

Take MSM-212

## MSM 285 – Motorsport Capstone Project 1 3 0 0 2

This course provides a capstone experience for the motorsports management technology student. Topics include planning, preparing, and developing a specific motorsports simulated project, including all aspects related to the management of the project. Upon completion, students should be able to document and defend a project, such as a new team start-up, major event management, or major sales promotion.

### Prerequisites

Take All: MSM-110 and BUS-137

## MUS – Music

### MUS 110 – Music Appreciation 3 0 0 0 3

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.

This course is a Universal General Education Transfer Component course that is guaranteed to transfer for general education equivalency credit to each of the 16 institutions in the University of North Carolina system.

### MUS 112 – Introduction to Jazz 3 0 0 0 3

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.

This course is a Universal General Education Transfer Component course that is guaranteed to transfer for general education equivalency credit to each of the 16 institutions in the University of North Carolina system.

### MUS 113 – American Music 3 0 0 0 3

This course introduces various musical styles, influences, and composers of the United States from pre-Colonial times to the present. Emphasis is placed on the broad variety of music particular to American culture. Upon completion, students should be able to demonstrate skills in basic listening and understanding of American music.

### MUS 114 – Non-Western Music 3 0 0 0 3

This course provides a basic survey of the music of the non-Western world. Emphasis is placed on non-traditional instruments, sources, and performing practices. Upon completion, students should be able to demonstrate skills in basic listening and understanding of the art of non-Western music.

### MUS 131 – Chorus I 0 2 0 0 1

This course provides an opportunity to gain experience singing in a chorus. Emphasis is placed on vocal techniques and the study and performance of a variety of styles and periods of choral literature. Upon completion, students should be able to demonstrate skills needed to participate in choral singing leading to performance.

### MUS 132 – Chorus II 0 2 0 0 1

This course provides a continuation of studies begun in MUS 131. Emphasis is placed on vocal techniques and the study and performance of a variety of styles and periods of choral literature. Upon completion, students should be able to demonstrate skills needed to participate in choral singing leading to performance.

Take MUS-131

### MUS 210 – History of Rock Music 3 0 0 0 3

This course is a survey of Rock music from the early 1950's to the present. Emphasis is placed on musical groups, soloists, and styles related to the evolution of this idiom and on related historical and social events. Upon completion, students should be able to identify specific styles and to explain the influence of selected performers within their respective eras.

### MUS 212 – American Musical Theatre 3 0 0 0 3

This course covers the origins and development of the musical from Show Boat to the present. Emphasis is placed on the investigation of the structure of the musical and its components through listening and analysis. Upon completion, students should be able to demonstrate skills in listening and understanding this form of American music.

### MUS 213 – Opera and Musical Theatre 3 0 0 0 3

This course covers the origins and development of opera and musical theatre from the works of Claudio Monteverdi to the present. Emphasis is placed on how the structure and components of opera and musicals effect dramaturgy through listening examples and analysis. Upon completion, students should be able to demonstrate analytical and listening skills in understanding both opera and the musical.

### MUS 231 – Chorus III 0 2 0 0 1

This course is a continuation of MUS 132. Emphasis is placed on vocal techniques and the study and performance of a variety of styles and periods of choral literature. Upon completion, students should be able to demonstrate skills needed to participate in choral singing leading to performance.

**Prerequisites**

Take MUS-132

**MUS 232 – Chorus IV** 0 2 0 0 1

This course is a continuation of MUS 231. Emphasis is placed on vocal techniques and the study of styles and periods of choral literature. Upon completion, students should be able to demonstrate skills needed to participate in choral singing leading to performance.

**Prerequisites**  
Take MUS-231

**NAS – Nursing Assistant**

**NAS 101 – Nurse Aide I** 3 4 3 0 6

This course includes basic nursing skills required to provide safe, competent personal care for individuals. Emphasis is placed on person-centered care, the aging process, communication, safety/emergencies, infection prevention, legal and ethical issues, vital signs, height and weight measurements, elimination, nutrition, basic restorative care/rehabilitation, dementia, mental health and end-of-life care. Upon completion, students should be able to demonstrate knowledge and skills and be eligible to test for listing on the North Carolina Nurse Aide I Registry.

**NAS 102 – Nurse Aide II** 3 2 6 0 6

This course provides training in Nurse Aide II tasks. Emphasis is placed on the role of the Nurse Aide II, sterile technique and specific tasks such as urinary catheterization, wound care, respiratory procedures, ostomy care, peripheral IV assistive activities, and alternative feeding methods. Upon completion, students should be able to demonstrate knowledge and skills and safe performance of skills necessary to be eligible for listing on the North Carolina Nurse Aide II Registry.

**Prerequisites**  
Take NAS-101

**NET – Networking Technology**

**NET 110 – Networking Concepts** 2 2 0 0 3

This course introduces students to the networking field. Topics include network terminology and protocols, local-area networks, wide-area networks, OSI model, cabling, router programming, Ethernet, IP addressing, and network standards. Upon completion, students should be able to perform tasks related to networking mathematics, terminology, and models, media, Ethernet, subnetting, and TCP/IP Protocols.

**Prerequisites**  
Take CIS-110

**NET 125 – Networking Basics** 1 4 0 0 3

This course introduces the networking field. Emphasis is placed on network terminology and protocols, local-area networks, wide-area networks, OSI model, cabling, router programming, Ethernet, IP addressing, and network standards. Upon completion, students should be able to perform tasks related to networking mathematics, terminology, and models, media, Ethernet, subnetting, and TCP/IP Protocols.

**NET 126 – Routing Basics** 1 4 0 0 3

This course focuses on initial router configuration, router software management, routing protocol configuration, TCP/IP, and access control lists (ACLs). Emphasis will be placed on the fundamentals of router configuration, managing router software, routing protocol, and access lists. Upon completion, students should have an understanding of routers and their role in WANs, router configuration, routing protocols, TCP/IP, troubleshooting, and ACLs.

**Prerequisites**  
Take NET-125

**NET 175 – Wireless Technology** 2 2 0 0 3

This course introduces the student to wireless technology and interoperability with different communication protocols. Topics include Wireless Application Protocol (WAP), Wireless Mark-up language (WML), link manager, service discovery protocol, transport layer and frequency band. Upon completion, students should be able to discuss in written and oral form protocols and procedures required for different wireless applications.

**Prerequisites**  
Take NET-110 or NET-125 ; Take NET-126

**NET 225 – Routing and Switching I** 1 4 0 0 3

This course focuses on advanced IP addressing techniques, intermediate routing protocols, command-line interface configuration of switches, Ethernet switching, VLANs, STP, and VTP. Emphasis will be placed on application and demonstration of skills acquired in pre-requisite courses. Upon completion, students should be able to perform tasks related to VLSM, routing protocols, switching concepts and configuration, STP, VLANs, and VTP.

**Prerequisites**  
Take NET-126

**NET 226 – Routing and Switching II** 1 4 0 0 3

This course introduces WAN theory and design, WAN technology, PPP, Frame Relay, ISDN, and additional case studies. Topics include network congestion problems, TCP/IP transport and network layer protocols, advanced routing and switching configuration, ISDN protocols, PPP encapsulation operations on a router. Upon completion, students should be able to provide solutions for network routing problems, identify ISDN protocols, and describe the Spanning Tree protocol.

**Prerequisites**

Take NET-225

**NET 289 – Networking Project** 1 4 0 0 3

This course provides an opportunity to complete a significant networking project from the design phase through implementation with minimal instructor support. Emphasis is placed on project definition, documentation, installation, testing, presentation, and training. Upon completion, students should be able to complete a project from the definition phase through implementation.

**Corequisites**

NET-226

## NOS – Network Operating Systems

**NOS 110 – Operating Systems Concepts** 2 3 0 0 3

This course introduces students to a broad range of operating system concepts, including installation and maintenance. Emphasis is placed on operating system concepts, management, maintenance, and resources required. Upon completion of this course, students will have an understanding of OS concepts, installation, management, maintenance, using a variety of operating systems.

**NOS 120 – Linux/UNIX Single User** 2 2 0 0 3

This course develops the necessary skills for students to develop both GUI and command line skills for using and customizing a Linux workstation. Topics include Linux file system and access permissions, GNOME Interface, VI editor, X Window System expression pattern matching, I/O redirection, network and printing utilities. Upon completion, students should be able to customize and use Linux systems for command line requirements and desktop productivity roles.

**Prerequisites**

Take One: CET-211, CTI-130, or NOS-110

**NOS 130 – Windows Single User** 2 2 0 0 3

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.

**Prerequisites**

Take One: CET-211, CTI-130, or NOS-110

**NOS 220 – Linux/Unix Administration I** 2 2 0 0 3

This course introduces the Linux file system, group administration, and system hardware controls. Topics include installation, creation and maintaining file systems, NIS client and DHCP client configuration, NFS, SMB/Samba, Configure X, Gnome, KDE, basic memory, processes, and security. Upon completion, students should be able to perform system administration tasks including installation, configuring and attaching a new Linux workstation to an existing network.

**Prerequisites**

Take NOS-120

**NOS 230 – Windows Administration I** 2 2 0 0 3

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.

**NOS 231 – Windows Administration II** 2 2 0 0 3

This course covers the management of a Windows Server operating system. Emphasis is placed on the deployment of print services, network services, Active Directory, group policies and access controls. Upon completion, students should be able to deploy and manage services on a Windows Server operating system.

**Prerequisites**

Take NOS-230

## NUR – Nursing

### NUR 101 – Practical Nursing I 7 6 6 0 11

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.

Clinical/laboratory experiences will focus on the development of basic skills, medication, administration, and understanding the nursing process in the care of medical/surgical clients.

**Corequisites**

Take BIO-163 OR both BIO-168 and BIO-169. Take PSY-110 OR both PSY-150 and PSY-241.

### NUR 102 – Practical Nursing II 7 0 9 0 10

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.

Clinical experiences will focus on discipline-specific roles in the care of medical and surgical clients.

**Corequisites**

ENG-111

**Prerequisites**

Take NUR-101, BIO-163, and PSY-110.

### NUR 103 – Practical Nursing III 6 0 9 0 9

This course focuses on use of nursing/related concepts by practical nurses as providers of care/members of discipline in collaboration with health team members. Emphasis is placed on the nursing process, wellness/illness patterns, entry-level issues, accountability, advocacy, professional development, evolving technology, and changing health care delivery systems. Upon completion, students should be able to use the nursing process to promote/maintain/restore optimum health for diverse clients throughout the life span.

Clinical experiences include geriatrics, medical-surgical, obstetrical and a medical-surgical preceptorship experience in a long-term care setting.

**Prerequisites**

Take NUR-101

### NUR 111 – Introduction to Health Concepts 4 6 6 0 8

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.

**Corequisites**

ENG-111 and PSY-150

### NUR 112 – Health-Illness Concepts 3 0 6 0 5

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.

**Corequisites**

NUR-211AB and BIO-169 and

**Prerequisites**

Take NUR-111; Take ENG-111 BIO-168 PSY-150;

### NUR 113 – Family Health Concepts 3 0 6 0 5

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.

**Corequisites**

NUR-211BB

**Prerequisites**

Take NUR-111; Take NUR-112 NUR-211AB ENG-112 BIO-169 PSY-241;

**NUR 114 – Holistic Health Concepts** 3 0 6 0 5

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.

**Corequisites**

NUR-212

**Prerequisites**

Take NUR-111; Take NUR-112 NUR-211 NUR-113;

**NUR 211 – Health Care Concepts** 3 0 6 0 5

This course is designed to further develop the concepts within the three domains of the individual, healthcare, and nursing. Emphasis is placed on the concepts of cellular regulation, perfusion, infection, immunity, mobility, comfort, behaviors, health-wellness-illness, clinical decision-making, caring interventions, managing care, and safety. Upon completion, students should be able to provide safe nursing care incorporating the concepts identified in this course.

**Prerequisites**

Take NUR-111

**NUR 211AB – Health Care Concepts, Part A** 1.5 0 3 0 2.5

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.

**NUR 211BB – Health Care Concepts, Part B** 1.5 0 3 0 2.5

This course is designed to further develop the concepts within the three domains of the individual, healthcare, and nursing. Emphasis is placed on the concepts of cellular regulation, perfusion, infection, immunity, mobility, comfort, behaviors, health-wellness-illness, clinical decision-making, caring interventions, managing care, and safety. Upon completion, students should be able to provide safe nursing care incorporating the concepts identified in this course.

**Prerequisites**

Take NUR-111; Take NUR-211AB

**NUR 212 – Health System Concepts** 3 0 6 0 5

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.

**Corequisites**

NUR-114

**Prerequisites**

Take NUR-111; Take NUR-112 NUR-211 NUR-113;

**NUR 213 – Complex Health Concepts** 4 3 15 0 10

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.

**Corequisites**

NUR-112 and NUR-114 and NUR-212

**Prerequisites**

Take NUR-111; Take BIO-275

## OMT – Operations Management

**OMT 240 – Customers and Products** 3 0 0 0 3

This course relates to the design, marketing, and service of a product from recognition of need to the end of its life cycle. Topics include marketing and sales, field service, product design and development, and their interrelationships. Upon completion, students should be able to demonstrate an understanding of customers and products and be prepared for the APICS CIRM examination.

**OMT 241 – Logistics** 3 0 0 0 3

This course presents the market-driven activities necessary to plan and procure materials, control manufacturing, and distribute products to customers throughout the supply chain. Topics include production and inventory control, procurement, distribution, and their interrelationships. Upon completion, students should be able to demonstrate an understanding of logistics and be prepared for the APICS CIRM examination.

**OMT 243 – Support Functions** 3 0 0 0 3

This course covers the broader activities an organization undertakes to assist its own internal departments. Topics include Total Quality Management, human resources, finance and accounting, information systems, and their interrelationships. Upon completion, students should be able to demonstrate an understanding of support functions and be prepared for the APICS CIRM examination.

**OST – Office Systems Technology**

**OST 130 – Comprehensive Keyboarding** 2 2 0 0 3

This course is designed to develop keyboarding skills and introductory document formatting. Emphasis is placed on keyboarding techniques and formatting basic business documents. Upon completion, students should be able to create documents in an ever-changing workplace.

**OST 134 – Text Entry and Formatting** 2 2 0 0 3

This course is designed to provide skills needed to increase speed, improve accuracy, and format documents. Topics include letters, memos, tables, and business reports. Upon completion, students should be able to produce documents and key timed writings at speeds commensurate with employability.

**Prerequisites**

Take OST-130;

**OST 135 – Advanced Text Entry and Formatting** 3 2 0 0 4

This course is designed to incorporate computer application skills in the generation of office documents. Emphasis is placed on advanced document production. Upon completion, students should be able to make independent decisions regarding planning, style, and method of presentation.

**Prerequisites**

Take OST-134

**OST 136 – Word Processing** 2 2 0 0 3

This course is designed to introduce word processing concepts and applications. Topics include preparation of a variety of documents and mastery of specialized software functions. Upon completion, students should be able to work effectively in a computerized word processing environment.

Students will use the most current Word software package in this course.

**OST 141 – Med Terms I-Med Office** 3 0 0 0 3

This course uses a language-structure approach to present the terminology and vocabulary that will be encountered in medical office settings. Topics include word parts that relate to systemic components, conditions, pathology, and disorder remediation in approximately one-half of the systems of the human body. Upon completion, students should be able to relate words to systems, pluralize, define, pronounce, and construct sentences with the included terms.

**OST 142 – Med Terms II-Med Office** 3 0 0 0 3

This course is a continuation of OST 141 and continues the study, using a language-structure approach, of medical office terminology and vocabulary. Topics include word parts that relate to systemic components, conditions, pathology, and disorder remediation in the remaining systems of the human body. Upon completion, students should be able to relate words to systems, pluralize, define, pronounce, and construct sentences with the included terms.

**Prerequisites**

Take OST-141.

**OST 143 – Dental Office Terminology** 3 0 0 0 3

This course introduces prefixes, suffixes, and word roots used in the dental office. Topics include dental anatomy and oral structures, tooth origin and formation, examination and prevention, tooth restorations, radiography, pain management and pharmacology. Upon completion, students should be able to pronounce, spell, and define dental terms as related to a dental practice.

**Corequisites**

MAT-272

**OST 147 – Dental Billing and Coding** 3 0 0 0 3

This course introduces Current Procedural Terminology, International Classification of Diseases, and Healthcare Common Procedural Coding System coding as they apply to dental insurance and billing. Topics include Current Dental Terminology-2 Dental Codes, office collections, American Dental Association Dental Claim Form, and insurance coverage. Upon completion, students should be able to describe the steps of the total billing/collections cycle for a dental office.

**Prerequisites**

Take OST-143

**OST 148 – Medical Coding Billing and Insurance** 3 0 0 0 3

This course introduces fundamentals of medical coding, billing, and insurance. Emphasis is placed on the medical billing cycle to include third party payers, coding concepts, and form preparation. Upon completion, students should be able to explain the life cycle of and accurately complete a medical insurance claim.

**OST 149 – Medical Legal Issues** 3 0 0 0 3

This course introduces the complex legal, moral, and ethical issues involved in providing health-care services. Emphasis is placed on the legal requirements of medical practices; the relationship of physician, patient, and office personnel; professional liabilities; and medical practice liability. Upon completion, students should be able to demonstrate a working knowledge of current medical law and accepted ethical behavior.

**OST 164 – Text Editing Applications** 3 0 0 0 3

This course provides a comprehensive study of editing skills needed in the workplace. Emphasis is placed on grammar, punctuation, sentence structure, proofreading, and editing. Upon completion, students should be able to use reference materials to compose and edit text.

**OST 165 – Advanced Text Editing Applications** 2 2 0 0 3

This course is designed to develop proficiency in advanced editing skills needed in the office environment. Emphasis is placed on the application of creating effective electronic office documents. Upon completion, students should be able to apply advanced editing skills to compose text.

**Prerequisites**

Take OST-164

**OST 181 – Introduction to Office Systems** 2 2 0 0 3

This course introduces the skills and abilities needed in today's office. Topics include effectively interacting with co-workers and the public, processing simple financial and informational documents, and performing functions typical of today's offices. Upon completion, students should be able to display skills and decision-making abilities essential for functioning in the total office context.

**OST 184 – Records Management** 2 2 0 0 3

This course includes the creation, maintenance, protection, security, and disposition of records stored in a variety of media forms. Topics include alphabetic, geographic, subject, and numeric filing methods. Upon completion, students should be able to set up and maintain a records management system.

**OST 236 – Advanced Word Or Information Processing** 2 2 0 0 3

This course develops proficiency in the utilization of advanced word/information processing functions. Emphasis is placed on advanced word processing features. Upon completion, students should be able to produce a variety of complex business documents.

Students will use the most current Word software package in this course.

**Prerequisites**

Take OST-136

**OST 243 – Med Office Simulation** 2 2 0 0 3

This course introduces medical systems used to process information in the automated office. Topics include traditional and electronic information resources, storing and retrieving information, and the billing cycle. Upon completion, students should be able to use the computer accurately to schedule, bill, update, and make corrections.

**Prerequisites**

Take OST-148; Take OST-142;

**OST 244 – Medical Document Production** 1 2 0 0 2

This course provides production-level skill development in processing medical documents. Emphasis is placed on producing malleable documents through the use of medical-related materials. Upon completion, students should be able to perform competently in preparing accurate, correctly formatted, and usable documents.

**Prerequisites**

Take OST-134; Take OST-142;

**OST 245 – Dental Office Management** 2 2 0 0 3

This course introduces the organizational structures, professional issues, and major functions of management in a dental office. Topics include communication skills, telephone techniques, patient relations, clinical records, bookkeeping procedures, office equipment, and inventory management. Upon completion, students should be able to apply the concepts of management within a dental office.

**Prerequisites**

Take OST-147

**OST 246 – Dental Office Simulation** 2 2 0 0 3

This course introduces dental software systems used to process information in the dental office. Topics include electronic information entering, storing, and retrieving in the dental office billing cycle. Upon completion, students should be able to use the computer accurately to schedule, bill, update, and make corrections in a dental office software system.

**Prerequisites**

Take OST-147

**OST 247 – Procedure Coding** 1 2 0 0 2

This course provides in-depth coverage of procedural coding. Emphasis is placed on CPT and HCPCS coding systems. Upon completion, students should be able to properly code procedures and services performed in a medical facility.

**Prerequisites**

Take MED-121 or OST-141

**OST 248 – Diagnostic Coding** 1 2 0 0 2

This course provides an in-depth study of diagnostic coding. Emphasis is placed on ICD coding system. Upon completion, students should be able to properly code diagnoses in a medical facility.

**Prerequisites**

Take MED-121 or OST-141

**OST 249 – CPC Certification** 3 2 0 0 4

This course provides instruction that will prepare students to sit for the American Association of Professional Coders (AAPC) CPC Exam. Topics include diagnostic and procedural coding. Upon completion, students should be able to sit for the AAPC CPC Exam.

**Prerequisites**

Take All: OST-247 and OST-248

**OST 284 – Emerging Technologies** 1 2 0 0 2

This course provides opportunities to explore emerging technologies. Emphasis is placed on identifying, researching, and presenting current technological topics for class consideration and discussion. Upon completion, students should be able to understand the importance of keeping abreast of technological changes that affect the office professional.

**OST 289 – Administrative Office Management** 2 2 0 0 3

This course is designed to be a capstone course for the office professional and provides a working knowledge of modern office procedures. Emphasis is placed on scheduling, telephone procedures, travel arrangements, event planning, office design, and ergonomics. Upon completion, students should be able to adapt in an office environment.

**Prerequisites**

Take One Set: Set 1: OST-134 and OST-164 Set 2: OST-136 and OST-164

**PED – Physical Education**

**PED 110 – Fit and Well for Life** 1 2 0 0 2

This course is designed to investigate and apply the basic concepts and principles of lifetime physical fitness and other health-related factors. Emphasis is placed on wellness through the study of nutrition, weight control, stress management, and consumer facts on exercise and fitness. Upon completion, students should be able to plan a personal, lifelong fitness program based on individual needs, abilities, and interests.

**PED 111 – Physical Fitness I** 0 3 0 0 1

This course provides an individualized approach to physical fitness utilizing the five major components. Emphasis is placed on the scientific basis for setting up and engaging in personalized physical fitness programs. Upon completion, students should be able to set up and implement an individualized physical fitness program.

**PED 112 – Physical Fitness II** 0 3 0 0 1

This course is an intermediate-level fitness class. Topics include specific exercises contributing to fitness and the role exercise plays in developing body systems. Upon completion, students should be able to implement and evaluate an individualized physical fitness program.

**Prerequisites**

Take PED-111

**PED 113 – Aerobics I** 0 3 0 0 1

This course introduces a program of cardiovascular fitness involving continuous, rhythmic exercise. Emphasis is placed on developing cardiovascular efficiency, strength, and flexibility and on safety precautions. Upon completion, students should be able to select and implement a rhythmic aerobic exercise program.

**PED 117 – Weight Training I** 0 3 0 0 1

This course introduces the basics of weight training. Emphasis is placed on developing muscular strength, muscular endurance, and muscle tone. Upon completion, students should be able to establish and implement a personal weight training program.

**PED 118 – Weight Training II** 0 3 0 0 1

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.

**Prerequisites**

Take PED-117

**PED 119 – Circuit Training** 0 3 0 0 1

This course covers the skills necessary to participate in a developmental fitness program. Emphasis is placed on the circuit training method which involves a series of conditioning timed stations arranged for maximum benefit and variety. Upon completion, students should be able to understand and appreciate the role of circuit training as a means to develop fitness.

**PED 120 – Walking for Fitness** 0 3 0 0 1

This course introduces fitness through walking. Emphasis is placed on stretching, conditioning exercises, proper clothing, fluid needs, and injury prevention. Upon completion, students should be able to participate in a recreational walking program.

**PED 121 – Walk, Jog, Run** 0 3 0 0 1

This course covers the basic concepts involved in safely and effectively improving cardiovascular fitness. Emphasis is placed on walking, jogging, or running as a means of achieving fitness. Upon completion, students should be able to understand and appreciate the benefits derived from these activities.

**PED 122 – Yoga I** 0 2 0 0 1

This course introduces the basic discipline of yoga. Topics include proper breathing, relaxation techniques, and correct body positions. Upon completion, students should be able to demonstrate the procedures of yoga.

**PED 124 – Run, Swim, Cycle** 0 3 0 0 1

This course introduces the sport of the triathlon. Topics include the rules, equipment, and skills necessary for the triathlon. Upon completion, students should be able to participate in a triathlon competition.

**PED 128 – Golf-Beginning** 0 2 0 0 1

This course emphasizes the fundamentals of golf. Topics include the proper grips, stance, alignment, swings for the short and long game, putting, and the rules and etiquette of golf. Upon completion, students should be able to perform the basic golf shots and demonstrate a knowledge of the rules and etiquette of golf.

**PED 130 – Tennis-Beginning** 0 2 0 0 1

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.

**PED 142 – Lifetime Sports** 0 2 0 0 1

This course is designed to give an overview of a variety of sports activities. Emphasis is placed on the skills and rules necessary to participate in a variety of lifetime sports. Upon completion, students should be able to demonstrate an awareness of the importance of participating in lifetime sports activities.

**PED 154 – Swimming for Fitness** 0 3 0 0 1

This course introduces lap swimming, aquacises, water activities, and games. Emphasis is placed on increasing cardiovascular efficiency through aquatic exercise. Upon completion, students should be able to develop an individualized aquatic fitness program.

**PED 217 – Pilates I** 0 2 0 0 1

This course provides an introduction to the pilates method of body conditioning exercise. Topics include instruction in beginning and intermediate pilates exercises using a mat or equipment, history of pilates method, and relevant anatomy and physiology. Upon completion, students should be able to perform beginning and intermediate exercises, and possess an understanding of the benefits of conditioning the body's core muscles.

**PED 259 – Prevention and Care of Athletic Injuries** 1 2 0 0 2

This course provides information on the prevention and care of athletic injuries. Topics include safety devices, taping, therapeutic techniques, and conditioning exercises. Upon completion, students should be able to demonstrate proper preventive measures and skills in caring for athletic injuries.

**PHI – Philosophy**

**PHI 210 – History of Philosophy** 3 0 0 0 3

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

**Prerequisites**  
Take ENG-111

**PHI 220 – Western Philosophy I** 3 0 0 0 3

This course covers Western intellectual and philosophic thought from the early Greeks through the medievalists. Emphasis is placed on such figures as the pre-Socratics, Plato, Aristotle, Epicurus, Epictetus, Augustine, Suarez, Anselm, and Aquinas. Upon completion, students should be able to trace the development of leading ideas regarding reality, knowledge, reason, and faith.

**Prerequisites**  
Take ENG-111

**PHI 221 – Western Philosophy II** 3 0 0 0 3

This course covers Western intellectual and philosophic thought from post-medievalists through recent thinkers. Emphasis is placed on such figures as Descartes, Spinoza, Leibnitz, Locke, Berkeley, Hume, Kant, Hegel, Marx, Mill, and representatives of pragmatism, logical positivism, and existentialism. Upon completion, students should be able to trace the development of leading ideas concerning knowledge, reality, science, society, and the limits of reason.

**Prerequisites**  
Take ENG-111

**PHI 230 – Introduction to Logic** 3 0 0 0 3

This course introduces basic concepts and techniques for distinguishing between good and bad reasoning. Emphasis is placed on deduction, induction, validity, soundness, syllogisms, truth functions, predicate logic, analogical inference, common fallacies, and scientific methods. Upon completion, students should be able to analyze arguments, distinguish between deductive and inductive arguments, test validity, and appraise inductive reasoning.

**Prerequisites**  
Take ENG-111

**PHI 240 – Introduction to Ethics** 3 0 0 0 3

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.

This course is a Universal General Education Transfer Component course that is guaranteed to transfer for general education equivalency credit to each of the 16 institutions in the University of North Carolina system.

**Prerequisites**  
Take ENG-111

**PHY – Physics**

**PHY 110 – Conceptual Physics** 3 0 0 0 3

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.

This course is a Universal General Education Transfer Component course that is guaranteed to transfer for general education equivalency credit to each of the 16 institutions in the University of North Carolina system.

**Prerequisites**  
Take 1 group; # Take MAT-060; # Take DMA-010 DMA-020 DMA-030 DMA-040;

**PHY 110A – Conceptual Physics Lab** 0 2 0 0 1

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.

This course is a Universal General Education Transfer Component course that is guaranteed to transfer for general education equivalency credit to each of the 16 institutions in the University of North Carolina system.

**Corequisites**

PHY-110

**PHY 131 – Physics-Mechanics** 3 2 0 0 4

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.

**Prerequisites**

Take One: MAT-121 or MAT-171

**PHY 132 – Physics-Electricity and Magnetism** 3 2 0 0 4

This algebra/trigonometry-based course is a study of fundamental physical concepts as applied to engineering technology fields. Topics include systems of units, problem-solving methods, graphical analysis, waves, electricity, magnetism, circuits, transformers, motors, and generators. Upon completion, students should be able to apply the principles studied to applications in engineering technology fields.

**Prerequisites**

Take PHY-131

**PHY 151 – College Physics I** 3 2 0 0 4

This course uses algebra- and trigonometry-based mathematical models to introduce the fundamental concepts that describe the physical world. Topics include units and measurement, vectors, linear kinematics and dynamics, energy, power, momentum, fluid mechanics, and heat. Upon completion, students should be able to demonstrate an understanding of the principles involved and display analytical problem-solving ability for the topics covered.

This course is a Universal General Education Transfer Component course that is guaranteed to transfer for general education equivalency credit to each of the 16 institutions in the University of North Carolina system.

**Prerequisites**

Take MAT-171

**PHY 152 – College Physics II** 3 2 0 0 4

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.

This course is a Universal General Education Transfer Component course that is guaranteed to transfer for general education equivalency credit to each of the 16 institutions in the University of North Carolina system.

**Prerequisites**

Take PHY-151

**PHY 251 – General Physics I** 3 3 0 0 4

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.

This course is a Universal General Education Transfer Component course that is guaranteed to transfer for general education equivalency credit to each of the 16 institutions in the University of North Carolina system.

**Corequisites**

MAT-272

**Prerequisites**

Take MAT-271

**PHY 252 – General Physics II** 3 3 0 0 4

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.

This course is a Universal General Education Transfer Component course that is guaranteed to transfer for general education equivalency credit to each of the 16 institutions in the University of North Carolina system.

**Prerequisites**

Take All: MAT-272 and PHY-251

**POL – Political Science**

**POL 110 – Introduction to Political Science** 3 0 0 0 3

This course introduces basic political concepts used by governments and addresses a wide range of political issues. Topics include political theory, ideologies, legitimacy, and sovereignty in democratic and non-democratic systems. Upon completion, students should be able to discuss a variety of issues inherent in all political systems and draw logical conclusions in evaluating these systems.

**POL 120 – American Government** 3 0 0 0 3

This course is a study of the origins, development, structure, and functions of American government. Topics include the constitutional framework, federalism, the three branches of government including the bureaucracy, civil rights and liberties, political participation and behavior, and policy process. Upon completion, students should be able to demonstrate an understanding of the basic concepts and participatory processes of the American political system.

This course is a Universal General Education Transfer Component course that is guaranteed to transfer for general education equivalency credit to each of the 16 institutions in the University of North Carolina system.

**POL 130 – State and Local Government** 3 0 0 0 3

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.

**POL 210 – Comparative Government** 3 0 0 0 3

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.

**POL 220 – International Relations** 3 0 0 0 3

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.

**PSY – Psychology**

**PSY 101 – Applied Psychology** 3 0 0 0 3

This course introduces the basic principles of psychology as they apply to daily life. Topics include perception, emotions, motivation, adjustment, behavior management, communication, and related topics that promote growth and development on the job and in one's personal life. Upon completion, students should be able to apply the principles learned in this class to everyday living. This course is restricted to diploma and/or certificate programs.

**PSY 110 – Life Span Development** 3 0 0 0 3

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.

**Prerequisites**

Take DRE-098 or ENG-111.

**PSY 115 – Stress Management** 2 0 0 0 2

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.

**PSY 118 – Interpersonal Psychology** 3 0 0 0 3

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.

**PSY 150 – General Psychology** 3 0 0 0 3

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.

This course is a Universal General Education Transfer Component course that is guaranteed to transfer for general education equivalency credit to each of the 16 institutions in the University of North Carolina system.

**Prerequisites**

Take DRE-098 or ENG-111.

**PSY 211 – Psychology of Adjustment** 3 0 0 0 3

This course introduces the study of the adjustment process focusing on contemporary challenges individuals must deal with in everyday life. Topics include theories of behavior, career choices, self-understanding, coping mechanisms, human relationships, intimacy, sociocultural factors influencing healthy personal adjustment, and other related topics. Upon completion, students should be able to demonstrate an awareness of the processes of adjustment.

**Prerequisites**

Take PSY-150

**PSY 215 – Positive Psychology** 3 0 0 0 3

This course is an overview of the scientific study of human strengths. Topics include resilience, optimism, vital engagement (flow), positive relationships, creativity, wisdom, happiness, empathy, emotional intelligence, and other relevant topics. Upon completion, students should be able to demonstrate an understanding of the psychological factors relevant to enhancing well being.

**Prerequisites**

Take PSY-150

**PSY 231 – Forensic Psychology** 3 0 0 0 3

This course introduces students to concepts which unite psychology and the legal system. Topics include defining competency, insanity, involuntary commitment, as well as introducing forensic assessment techniques, such as interviewing process, specialized assessments, and collecting collateral information. Upon completion, students should be able to demonstrate knowledge in areas of forensic psychology: risk assessment, criminal competencies, insanity, psychopathology, and mentally disordered offenders.

**Prerequisites**

Take PSY-150

**PSY 234 – Organizational Psychology** 3 0 0 0 3

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.

**Prerequisites**

Take PSY-150

**PSY 237 – Social Psychology** 3 0 0 0 3

This course introduces the study of individual behavior within social contexts. Topics include affiliation, attitude formation and change, conformity, altruism, aggression, attribution, interpersonal attraction, and group behavior. Upon completion, students should be able to demonstrate an understanding of the basic principles of social influences on behavior.

**Prerequisites**

Take One: PSY-150 or SOC-210

**PSY 239 – Psychology of Personality** 3 0 0 0 3

This course covers major personality theories and personality research methods. Topics include psychoanalytic, behavioristic, social learning, cognitive, humanistic, and trait theories including supporting research. Upon completion, students should be able to compare and contrast traditional and contemporary approaches to the understanding of individual differences in human behavior.

**Prerequisites**

Take PSY-150

**PSY 241 – Developmental Psychology** 3 0 0 0 3

This course is a study of human growth and development. Emphasis is placed on major theories and perspectives as they relate to the physical, cognitive, and psychosocial aspects of development from conception to death. Upon completion, students should be able to demonstrate knowledge of development across the life span.

**Prerequisites**

Take PSY-150

**PSY 243 – Child Psychology** 3 0 0 0 3

This course provides an overview of physical, cognitive, and psychosocial development from conception through adolescence. Topics include theories and research, interaction of biological and environmental factors, language development, learning and cognitive processes, social relations, and moral development. Upon completion, students should be able to identify typical and atypical childhood behavior patterns as well as appropriate strategies for interacting with children.

**Prerequisites**

Take PSY-150

**PSY 246 – Adolescent Psychology** 3 0 0 0 3

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.

**Prerequisites**

Take PSY-150

**PSY 249 – Psychology of Aging** 3 0 0 0 3

This course covers the particular needs and behaviors of the maturing adult. Emphasis is placed on psychosocial processes; biological and intellectual aspects of aging; adjustments to retirement, dying, bereavement; and the stereotypes and misconceptions concerning the elderly. Upon completion, students should be able to show an understanding of the psychological factors related to the aging process.

**Prerequisites**

Take PSY-150

**PSY 259 – Human Sexuality** 3 0 0 0 3

This course provides the biological, psychological, and sociocultural aspects of human sexuality and related research. Topics include reproductive biology, sexual and psychosexual development, sexual orientation, contraception, sexually transmitted diseases, sexual disorders, theories of sexuality, and related issues. Upon completion, students should be able to demonstrate an overall knowledge and understanding of human sexuality.

**Prerequisites**

Take PSY-150

**PSY 263 – Educational Psychology** 3 0 0 0 3

This course examines the application of psychological theories and principles to the educational process and setting. Topics include learning and cognitive theories, achievement motivation, teaching and learning styles, teacher and learner roles, assessment, and developmental issues. Upon completion, students should be able to demonstrate an understanding of the application of psychological theory to educational practice.

**Prerequisites**

Take PSY-150

**PSY 271 – Sports Psychology** 3 0 0 0 3

This course provides an overview of the field of sports and exercise psychology. Topics include concentration, goal setting, arousal level, exercise psychology, mental imagery, confidence, and other issues related to sport and exercise performance. Upon completion, students should be able to demonstrate a knowledge of psychological factors involved in sport and exercise.

**Prerequisites**

Take PSY-150

**PSY 275 – Health Psychology** 3 0 0 0 3

This course covers the biopsychosocial dynamics of stress and the maintenance of good health. Topics include enhancing health and well-being, stress management, lifestyle choices and attitudes, the mind-body relationship, nutrition, exercise, and fitness. Upon completion, students should be able to demonstrate an understanding of the psychological factors related to health and well-being.

**Prerequisites**

Take PSY-150

**PSY 281 – Abnormal Psychology** 3 0 0 0 3

This course provides an examination of the various psychological disorders, as well as theoretical, clinical, and experimental perspectives of the study of psychopathology. Emphasis is placed on terminology, classification, etiology, assessment, and treatment of the major disorders. Upon completion, students should be able to distinguish between normal and abnormal behavior patterns as well as demonstrate knowledge of etiology, symptoms, and therapeutic techniques.

**Prerequisites**

Take PSY-150

**RAD – Radiography**

**RAD 110 – Rad Intro and Patient Care** 2 3 0 0 3

This course provides an overview of the radiography profession and student responsibilities. Emphasis is placed on basic principles of patient care, radiation protection, technical factors, and medical terminology. Upon completion, students should be able to demonstrate basic skills in these areas.

**Corequisites**

Take RAD-111 and RAD-151.

**RAD 111 – RAD Procedures I** 3 3 0 0 4

This course provides the knowledge and skills necessary to perform standard radiographic procedures. Emphasis is placed on radiography of the chest, abdomen, extremities, spine, and pelvis. Upon completion, students should be able to demonstrate competence in these areas.

**Corequisites**

Take RAD-110 and RAD-151.

**RAD 112 – RAD Procedures II** 3 3 0 0 4

This course provides the knowledge and skills necessary to perform standard radiographic procedures. Emphasis is placed on radiography of the skull, bony thorax, and gastrointestinal, biliary, and urinary systems. Upon completion, students should be able to demonstrate competence in these areas.

**Prerequisites**

Take All: RAD-110, RAD-111, and RAD-151

**RAD 121 – Radiographic Imaging I** 2 3 0 0 3

This course provides the basic principles of imaging. Emphasis is placed on the factors that impact density, contrast, recorded detail, and distortion. Upon completion, students should be able to demonstrate an understanding of basic radiographic imaging.

**Corequisites**

Take All: RAD-112 and RAD-161

**Prerequisites**

Take All: RAD-110, RAD-111, and RAD-151

**RAD 122 – Radiographic Imaging II** 1 3 0 0 2

This course provides advanced principles of imaging including digital radiography. Emphasis is placed on the factors that impact brightness, contrast, recorded detail, and distortion. Upon completion, students should be able to demonstrate an understanding of advanced principles of imaging.

**Corequisites**

Take All: RAD-131 and RAD-171

**Prerequisites**

Take All: RAD-112, RAD-121, and RAD-161

**RAD 131 – Radiographic Physics I** 1 3 0 0 2

This course introduces the principles of radiation characteristics and production. Emphasis is placed on imaging equipment. Upon completion, students should be able to demonstrate a basic understanding of radiation characteristics and production.

**Corequisites**

Take All: RAD-122 and RAD-171

**Prerequisites**

Take RAD-121

**RAD 151 – RAD Clinical Ed I** 0 0 6 0 2

This course introduces patient management and basic radiographic procedures in the clinical setting. Emphasis is placed on mastering positioning of the chest and extremities, manipulating equipment, and applying principles of ALARA. Upon completion, students should be able to demonstrate successful completion of clinical objectives.

**Corequisites**

Take RAD-110 and RAD-111.

**RAD 161 – RAD Clinical Ed II** 0 0 15 0 5

This course provides additional experience in patient management and in more complex radiographic procedures. Emphasis is placed on mastering positioning of the spine, pelvis, head and neck, and thorax and adapting procedures to meet patient variations. Upon completion, students should be able to demonstrate successful completion of clinical objectives.

**Corequisites**

Take RAD-112 and RAD-121.

**Prerequisites**

Take All: RAD-110, RAD-111, and RAD-151

**RAD 171 – RAD Clinical Ed III** 0 0 12 0 4

This course provides experience in patient management specific to fluoroscopic and advanced radiographic procedures. Emphasis is placed on applying appropriate technical factors to all studies and mastering positioning of gastrointestinal and urological studies. Upon completion, students should be able to demonstrate successful completion of clinical objectives.

**Corequisites**

Take RAD-122 and RAD-131.

**Prerequisites**

Take All: RAD-112, RAD-121, and RAD-161

**RAD 211 – Radiographic Procedures III** 2 3 0 0 3

This course provides the knowledge and skills necessary to perform standard and specialty radiographic procedures. Emphasis is placed on radiographic specialty procedures, sectional anatomy, and advanced imaging. Upon completion, students should be able to demonstrate an understanding of these areas.

**Corequisites**

Take All: RAD-231, RAD-241, and RAD-251

**Prerequisites**

Take All: RAD-122, RAD-131, and RAD-171

**RAD 231 – Radiographic Physics II** 1 3 0 0 2

This course provides advanced principles of radiation characteristics and production including digital imaging and Computed Tomography (CT). Emphasis is placed on imaging equipment. Upon completion, students should be able to demonstrate an understanding of radiation characteristics and production.

**Corequisites**

Take All: RAD-211, RAD-241, and RAD-251

**Prerequisites**

Take One: RAD-131 or RAD-171

**RAD 241 – Radiobiology/Protection** 2 0 0 0 2

This course covers the principles of radiation protection and radiobiology. Topics include the effects of ionizing radiation on body tissues, protective measures for limiting exposure to the patient and personnel, and radiation monitoring devices. Upon completion, students should be able to demonstrate an understanding of the effects and uses of radiation in diagnostic radiology.

**Corequisites**

Take RAD-211, RAD-231, RAD-251.

**Prerequisites**

Take All: RAD-122, RAD-131, and RAD-171

**RAD 245 – Image Analysis** 1 3 0 0 2

This course provides an overview of image analysis and introduces methods of quality management. Topics include image evaluation, pathology, quality control, and quality assurance. Upon completion, students should be able to demonstrate a basic knowledge of image analysis and quality management.

**Corequisites**

Take All: RAD-261 and RAD-271

**Prerequisites**

Take All: RAD-211, RAD-231, RAD-241, and RAD-251

**RAD 251 – RAD Clinical Ed IV** 0 0 21 0 7

This course provides the opportunity to continue mastering all basic radiographic procedures and to attain experience in advanced areas. Emphasis is placed on equipment operation, pathological recognition, pediatric and geriatric variations, and a further awareness of radiation protection requirements. Upon completion, students should be able to demonstrate successful completion of clinical objectives.

**Corequisites**

Take RAD-211, RAD-231, and RAD-241.

**Prerequisites**

Take All: RAD-122, RAD-131, and RAD-171

**RAD 261 – Radiographic Clinical Education V** 0 0 21 0 7

This course is designed to enhance expertise in all radiographic procedures, patient management, radiation protection, and image production and evaluation. Emphasis is placed on developing an autonomous approach to the diversity of clinical situations and successfully adapting to those procedures. Upon completion, students should be able to demonstrate successful completion of clinical objectives.

**Corequisites**

Take All: RAD-245 and RAD-271

**Prerequisites**

Take RAD-251

**RAD 271 – Radiography Capstone** 0 3 0 0 1

This course provides an opportunity to exhibit problem-solving skills required for certification. Emphasis is placed on critical thinking and integration of didactic and clinical components. Upon completion, students should be able to demonstrate the knowledge required of an entry-level radiographer.

**Corequisites**

Take RAD-245 and RAD-261.

**Prerequisites**

Take All: RAD-211, RAD-231, RAD-241, and RAD-251

## REF – Refrigeration

**REF 116 – Commercial Systems I** 2 6 0 0 4

This course introduces and compares various commercial refrigeration systems. Topics include service, repair, and diagnostic procedures for commercial systems and components, as well as evacuation, charging, startup, and evaluation. Upon completion, students should be able to use appropriate tools, instruments, and procedures to service and install basic refrigeration systems or components.

**Prerequisites**

Take AHR-115

**REF 117 – Refrigeration Controls** 2 6 0 0 4

This course covers the design, operation, function, and schematics of basic control systems used in the refrigeration industry. Topics include proper control application, selection, and use of test instruments; simple control wiring; and the use of schematics as a troubleshooting tool. Upon completion, students should be able to identify, diagnose, and repair electrical and mechanical malfunctioning components.

This course is a Universal General Education Transfer Component course that is guaranteed to transfer for general education equivalency credit to each of the 16 institutions in the University of North Carolina system.

**Prerequisites**

Take One: AHR-110, AHR-111, or ELC-111

**REF 123 – Electrical Devices** 2 6 0 0 4

This course introduces the electrical and electronic components and test instruments commonly found in commercial refrigeration. Emphasis is placed on troubleshooting electrical and electronic devices, including motors, starting devices, switches, transformers, programmable controls, defrost controls, thermostats, and wiring systems. Upon completion, students should be able to use test equipment appropriately and safely to troubleshoot, test, and repair electrical devices.

**Prerequisites**

Take One: AHR-111 or ELC-111

**REF 259 – Refrigeration Codes** 3 0 0 0 3

This course covers the current commercial refrigeration codes, including applicable North Carolina laws and codes. Emphasis is placed on the application of the codes in respect to systems installation, operation, recovery, and repair. Upon completion, students should be able to demonstrate knowledge of codes, accepted standards, and recommended practices as related to commercial refrigeration.

**REF 260 – Commercial Systems II** 2 6 0 0 4

This course covers the installation and start up of common commercial refrigeration systems. Topics include the installation of display/storage boxes or cases, walk-in systems, dispensing machines, ice-making equipment, and refrigerated laboratory equipment. Upon completion, students should be able to safely install and start up common commercial refrigeration systems.

**Prerequisites**

Take One: AHR-115 or ELC-111

## REL – Religion

**REL 110 – World Religions** 3 0 0 0 3

This course introduces the world's major religious traditions. Topics include Primal religions, Hinduism, Buddhism, Islam, Judaism, and Christianity. Upon completion, students should be able to identify the origins, history, beliefs, and practices of the religions studied.

**REL 211 – Introduction to Old Testament** 3 0 0 0 3

This course is a survey of the literature of the Hebrews with readings from the law, prophets, and other writings. Emphasis is placed on the use of literary, historical, archeological, and cultural analysis. Upon completion, students should be able to use the tools of critical analysis to read and understand Old Testament literature.

**REL 212 – Introduction to New Testament** 3 0 0 0 3

This course is a survey of the literature of first-century Christianity with readings from the gospels, Acts, and the Pauline and pastoral letters. Topics include the literary structure, audience, and religious perspective of the writings, as well as the historical and cultural context of the early Christian community. Upon completion, students should be able to use the tools of critical analysis to read and understand New Testament literature.

**REL 221 – Religion in America** 3 0 0 0 3

This course is an examination of religious beliefs and practice in the United States. Emphasis is placed on mainstream religious traditions and non-traditional religious movements from the Colonial period to the present. Upon completion, students should be able to recognize and appreciate the diversity of religious traditions in America.

## SEC – Information Systems Security

**SEC 110 – Security Concepts** 2 2 0 0 3

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.

**Corequisites**

MAT-121 or MAT-171

**SEC 150 – Secure Communications** 2 2 0 0 3

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.

**Prerequisites**

Take One Set: Set 1: SEC-110 and NET-110 Set 2: SEC-110 and NET-125

**SEC 160 – Security Administration I** 2 2 0 0 3

This course provides an overview of security administration and fundamentals of designing security architectures. Topics include networking technologies, TCP/IP concepts, protocols, network traffic analysis, monitoring, and security best practices. Upon completion, students should be able to identify normal network traffic using network analysis tools and design basic security defenses.

**Prerequisites**

# Take SEC-110; # Take NET-110(S21056) or NET-125(S21095); Take NET-226(S21099);

**SEC 210 – Intrusion Detection** 2 2 0 0 3

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.

**Prerequisites**

Take SEC-160

## SGD – Simulation and Game Development

**SGD 111 – Introduction to Simulation and Game Development** 2 3 0 0 3

This course provides students with an introduction to simulation and game development. Topics include setting, storytelling, narrative, character design, interface design, game play, internal economy, core mechanics, game genres, AI, the psychology of game design and professionalism. Upon completion, students should be able to demonstrate knowledge of the major aspects of simulation and game design and development.

**SGD 112 – Simulation and Game Development Design** 2 3 0 0 3

This course introduces the fundamentals of simulation and game design. Topics include industry standards and design elements for simulation and games. Upon completion, students should be able to design simple simulations and/or games.

**SGD 113 – Simulation and Game Development Programming** 2 3 0 0 3

This course introduces the fundamentals of programming languages and tools employed in simulation and game development. Emphasis is placed on programming concepts used to create simulations and games. Upon completion, students should be able to program simple games and/or simulations.

**SGD 174 – Simulation and Game Level Design** 2 3 0 0 3

This course introduces the tools used to create levels for real-time simulation and games. Topics include level design, architecture theory, modeling for 3D engines and texturing methods. Upon completion, students should be able to design simple levels using industry standard tools.

**SGD 212 – Simulation and Game Development Design II** 2 3 0 0 3

This course covers the advanced principles of simulation and game design. Topics include advanced design concepts in simulation and game development. Upon completion, students should be able to design an advanced simulation or game.

**Prerequisites**

Take SGD-112

**SGD 274 – Simulation and Game Level Design II** 2 3 0 0 3

This course introduces the advanced tools used to create levels for real-time simulations and games. Topics include advanced level guide and architecture theory, concepts related to "critical path" and "flow," game balancing, playtesting and storytelling. Upon completion, students should be able to design complex levels using industry standard tools.

**Prerequisites**

Take SGD-174

**SGD 289 – Simulation and Game Development Project** 2 3 0 0 3

This course provides students with the opportunity to create a functional simulation or game with minimal instructor support. Emphasis is placed upon verbal and written communication, skill documentation, professional presentation and user training. Upon completion, students should be able to create and professionally present a fully functional simulation or game.

**Prerequisites**

Take One: SGD-212, SGD-213, SGD-214, or SGD-285

**SOC – Sociology**

**SOC 100 – Concepts in Sociology** 3 0 0 0 3

This course examines the basic concepts of sociology from the perspective of the individual as a member of society. Topics include an understanding of society, culture, collective behavior, community life, social institutions, social change, and the effect of social life on human behavior. Upon completion, students should be able to demonstrate knowledge of the impact of social interaction on institutions, groups, and individuals. This course is restricted to diploma and/or certificate programs.

**SOC 210 – Introduction to Sociology** 3 0 0 0 3

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.

This course is a Universal General Education Transfer Component course that is guaranteed to transfer for general education equivalency credit to each of the 16 institutions in the University of North Carolina system.

**SOC 213 – Sociology of the Family** 3 0 0 0 3

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.

**SOC 215 – Group Processes** 3 0 0 0 3

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.

**SOC 220 – Social Problems** 3 0 0 0 3

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.

**SOC 225 – Social Diversity** 3 0 0 0 3

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.

**Please note that this is a writing intensive course.**

**SOC 230 – Race and Ethnic Relations** 3 0 0 0 3

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.

**SOC 232 – Social Context of Aging** 3 0 0 0 3

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.

**SOC 234 – Sociology of Gender** 3 0 0 0 3

This course examines contemporary roles in society with special emphasis on recent changes. Topics include sex role socialization, myths and stereotypes, gender issues related to family, work, and power. Upon completion, students should be able to analyze modern relationships between men and women.

**SOC 240 – Social Psychology** 3 0 0 0 3

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.

**Please note that this is a writing intensive course.**

**SOC 242 – Sociology of Deviance** 3 0 0 0 3

This course provides an overview of deviant behavior and the processes involved in its definition, causation, prevention, control, and treatment. Topics include theories of causation, social control, delinquency, victimization, criminality, the criminal justice system, punishment, rehabilitation, and restitution. Upon completion, students should be able to identify and analyze issues surrounding the nature and development of social responses to deviance.

**SOC 244 – Sociology of Death and Dying** 3 0 0 0 3

This course presents sociological perspectives on death and dying. Emphasis is placed on analyzing the different death rates among various groups, races, and societies, as well as various types of death. Upon completion, students should be able to discuss the rituals of death, both cultural and religious, and examine current issues relating to death and dying.

**SOC 245 – Drugs and Society** 3 0 0 0 3

This course covers the impact of drugs on society and human behavior. Emphasis is placed on the construction of a modern social problem from contrasting historical responses to mind-altering substances. Upon completion, students should be able to apply sociological analysis in evaluating drug use as a societal and interpersonal problem.

**Prerequisites**

Take All: DRE-098 and SOC-210

**SOC 250 – Sociology of Religion** 3 0 0 0 3

This course examines religion from a sociological perspective as part and product of human society. Topics include the origins, development, and functions of belief systems; religious organizations; conversion; and interactions with politics, the economy, science, and the class system. Upon completion, students should be able to describe and analyze religious systems.

**SPA – Spanish**

**SPA 111 – Elementary Spanish I** 3 0 0 0 3

This course introduces the fundamental elements of the Spanish language within a cultural context. Emphasis is placed on the development of basic listening, speaking, reading, and writing skills. Upon completion, students should be able to comprehend and respond with grammatical accuracy to spoken and written Spanish and demonstrate cultural awareness.

**Prerequisites**

Take DRE-097, DRE-098, or ENG-111.

**SPA 112 – Elementary Spanish II** 3 0 0 0 3

This course is a continuation of SPA 111 focusing on the fundamental elements of the Spanish language within a cultural context. Emphasis is placed on the progressive development of listening, speaking, reading, and writing skills. Upon completion, students should be able to comprehend and respond with increasing proficiency to spoken and written Spanish and demonstrate further cultural awareness.

**Prerequisites**

Take SPA-111

**SPA 120 – Spanish for the Workplace** 3 0 0 0 3

This course offers applied Spanish for the workplace to facilitate basic communication with people whose native language is Spanish. Emphasis is placed on oral communication and career-specific vocabulary that targets health, business, and/or public service professions. Upon completion, students should be able to communicate at a functional level with native speakers and demonstrate cultural sensitivity.

**SPA 211 – Intermediate Spanish I** 3 0 0 0 3

This course provides a review and expansion of the essential skills of the Spanish language. Emphasis is placed on the study of authentic and representative literary and cultural texts. Upon completion, students should be able to communicate effectively, accurately, and creatively about the past, present, and future.

**Prerequisites**

Take SPA-112

**SPA 212 – Intermediate Spanish II** 3 0 0 0 3

This course provides a continuation of SPA 211. Emphasis is placed on the continuing study of authentic and representative literary and cultural texts. Upon completion, students should be able to communicate spontaneously and accurately with increasing complexity and sophistication.

**Prerequisites**

Take SPA-211

**SPA 231 – Reading and Composition** 3 0 0 0 3

This course provides an opportunity for intensive reading and composition in Spanish. Emphasis is placed on the use of literary and cultural materials to enhance and expand reading and writing skills. Upon completion, students should be able to demonstrate in writing an in-depth understanding of assigned readings.

**Prerequisites**

Take SPA-212

**SRV – Surveying****SRV 110 – Surveying I** 2 6 0 0 4

This course introduces the theory and practice of plane surveying. Topics include the precise measurement of distances, angles, and elevations; bearing, azimuth and traverse computations; topography and mapping. Upon completion, students should be able to use/care for surveying equipment, collect field survey data, perform traverse computations and create a contour map.

**Corequisites**

MAT-121 or MAT-171

**SRV 111 – Surveying II** 2 6 0 0 4

This course introduces route surveying and roadway planning and layout. Topics include simple, compound, reverse, spiral, and vertical curves; geometric design and layout; planning of cross-section and grade line; drainage; earthwork calculations; and mass diagrams. Upon completion, students should be able to calculate and lay out highway curves; prepare roadway plans, profiles, and sections; and perform slope staking.

**Prerequisites**

Take SRV-110

**SST – Sustainability Technologies****SST 140 – Green Building and Design Concepts** 3 0 0 0 3

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.

**TRN – Transportation Technology****TRN 110 – Introduction to Transport Tech** 1 2 0 0 2

This course covers workplace safety, hazardous materials, environmental regulations, hand tools, service information, basic concepts, vehicle systems, and common transportation industry terminology. Topics include familiarization with major vehicle systems, proper use of various hand and power tools, material safety data sheets, and personal protective equipment. Upon completion, students should be able to demonstrate appropriate safety procedures, identify and use basic shop tools, and describe government regulations regarding transportation repair facilities.

**TRN 120 – Basic Transportation Electricity** 4 3 0 0 5

This course covers basic electrical theory, wiring diagrams, test equipment, and diagnosis, repair and replacement of batteries, starters, and alternators. Topics include Ohm's Law, circuit construction, wiring diagrams, circuit testing, and basic troubleshooting. Upon completion, students should be able to properly use wiring diagrams, diagnose, test, and repair basic wiring, battery, starting, charging, and electrical concerns.

**TRN 130 – Intro to Sustainable Transportation** 2 2 0 0 3

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.

**Prerequisites**

Take AUT-151, AUT-163, and AUT-183;

**TRN 140 – Transportation Climate Control** 1 2 0 0 2

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.

**Corequisites**

TRN-140A

**Prerequisites**

Take TRN-120;

**TRN 140A – Transportation Climate Control Lab** 1 2 0 0 2

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.

**Corequisites**

TRN-140

**TRN 170 – Pc Skills for Transportation** 1 2 0 0 2

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.

**WBL – Work-Based Learning**

**WBL 110 – World of Work** 1 0 0 0 1

This course covers basic knowledge necessary for gaining and maintaining employment. Topics include job search skills, work ethic, meeting employer expectations, workplace safety, and human relations. Upon completion, students should be able to successfully make the transition from school to work.

**WBL 111 – Work-Based Learning I** 0 0 0 10 1

This course provides a work-based learning experience with a college-approved employer in an area related to the student's program of study. Emphasis is placed on integrating classroom learning with related work experience. Upon completion, students should be able to evaluate career selection, demonstrate employability skills, and satisfactorily perform work-related competencies.

**WBL 112 – Work-Based Learning I** 0 0 0 20 2

This course provides a work-based learning experience with a college-approved employer in an area related to the student's program of study. Emphasis is placed on integrating classroom learning with related work experience. Upon completion, students should be able to evaluate career selection, demonstrate employability skills, and satisfactorily perform work-related competencies.

**WBL 113 – Work-Based Learning I** 0 0 0 30 3

This course provides a work-based learning experience with a college-approved employer in an area related to the student's program of study. Emphasis is placed on integrating classroom learning with related work experience. Upon completion, students should be able to evaluate career selection, demonstrate employability skills, and satisfactorily perform work-related competencies.

**WBL 114 – Work-Based Learning I** 0 0 0 40 4

This course provides a work-based learning experience with a college-approved employer in an area related to the student's program of study. Emphasis is placed on integrating classroom learning with related work experience. Upon completion, students should be able to evaluate career selection, demonstrate employability skills, and satisfactorily perform work-related competencies.

**WBL 121 – Work-Based Learning II** 0 0 0 10 1

This course provides a work-based learning experience with a college-approved employer in an area related to the student's program of study. Emphasis is placed on integrating classroom learning with related work experience. Upon completion, students should be able to evaluate career selection, demonstrate employability skills, and satisfactorily perform work-related competencies.

**WBL 122 – Work-Based Learning II** 0 0 0 20 2

This course provides a work-based learning experience with a college-approved employer in an area related to the student's program of study. Emphasis is placed on integrating classroom learning with related work experience. Upon completion, students should be able to evaluate career selection, demonstrate employability skills, and satisfactorily perform work-related competencies.

**WBL 123 – Work-Based Learning II** 0 0 0 30 3

This course provides a work-based learning experience with a college-approved employer in an area related to the student's program of study. Emphasis is placed on integrating classroom learning with related work experience. Upon completion, students should be able to evaluate career selection, demonstrate employability skills, and satisfactorily perform work-related competencies.

**WBL 131 – Work-Based Learning III** 0 0 0 10 1

This course provides a work-based learning experience with a college-approved employer in an area related to the student's program of study. Emphasis is placed on integrating classroom learning with related work experience. Upon completion, students should be able to evaluate career selection, demonstrate employability skills, and satisfactorily perform work-related competencies.

**WBL 132 – Work-Based Learning III** 0 0 0 20 2

This course provides a work-based learning experience with a college-approved employer in an area related to the student's program of study. Emphasis is placed on integrating classroom learning with related work experience. Upon completion, students should be able to evaluate career selection, demonstrate employability skills, and satisfactorily perform work-related competencies.

**WBL 211 – Work-Based Learning IV** 0 0 0 10 1

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.

## WEB – Web Technologies

**WEB 110 – Internet/Web Fundamentals** 2 2 0 0 3

This course introduces World Wide Web Consortium (W3C) standard markup language and services of the Internet. Topics include creating web pages, search engines, FTP, and other related topics. Upon completion, students should be able to deploy a hand-coded website created with mark-up language, and effectively use and understand the function of search engines.

**WEB 111 – Introduction to Web Graphics** 2 2 0 0 3

This course introduces the creation of web graphics, and addressing problems peculiar to WWW display using appropriate software. Topics include web graphics file types, optimization, RGB color, web typography, elementary special effects, transparency, animation, slicing, basic photo manipulation, and other related topics. Upon completion, students should be able to create graphics, such as animated banners, buttons, backgrounds, logos, and manipulate photographic images for Web delivery.

**WEB 115 – Web Markup and Scripting** 2 2 0 0 3

This course introduces Worldwide Web Consortium (W3C) standard client-side Internet programming using industry-established practices. Topics include JavaScript, markup elements, stylesheets, validation, accessibility, standards, and browsers. Upon completion, students should be able to develop hand-coded web pages using current markup standards.

**WEB 120 – Introduction to Internet Multimedia** 2 2 0 0 3

This course introduces the creation of rich media for the Internet. Topics include the design, production and delivery of interactive content, rich media, digital video, and digital audio. Upon completion, students should be able to create multimedia projects incorporating graphics, text, video, and audio using industry standard authoring software or web standards.

**WEB 125 – Mobile Web Design** 2 2 0 0 3

This course introduces students to web design for mobile devices. Topics include planning an effective mobile Web site, industry standard Mobile Markup Language, CSS3, multimedia, m-commerce, social media, testing and publishing. Upon completion, students should be able to plan, develop, test, and publish Web content designed for mobile devices.

**Prerequisites**

Take WEB-110

**WEB 140 – Web Development Tools** 2 2 0 0 3

This course provides an introduction to web development software suites. Topics include the creation of web sites and applets using web development software. Upon completion, students should be able to create entire web sites and supporting applets.

**WEB 141 – Mobile Interface Design** 2 2 0 0 3

This course covers current design standards and emerging approaches related to the design and development of user interfaces for mobile devices. Emphasis is placed on research and evaluation of standard and emerging practices for effective interface and user experience design. Upon completion, students should be able to design effective and usable interfaces for mobile devices.

**WEB 151 – Mobile Application Development I** 2 2 0 0 3

This course introduces students to programming technologies, design and development related to mobile applications. Topics include accessing device capabilities, industry standards, operating systems, and programming for mobile applications using an OS Software Development Kit (SDK). Upon completion, students should be able to create basic applications for mobile devices.

**Prerequisites**

Take DMA-010 DMA-020 DMA-030 DMA-040;

**WEB 179 – JAVA Web Programming** 2 3 0 0 3

This course introduces the development of dynamic, database-driven web applications using the JAVA programming languages. Topics include Object Oriented Programming JAVA Server Pages, servlets, database interactions, and form handling. Upon completion, students should be able to create and modify JAVA-based internet applications.

**Prerequisites**

Take CIS-115 CSC-151;

**WEB 180 – Active Server Pages** 2 2 0 0 3

This course introduces active server programming. Topics include HTML forms processing and other issues related to developing active web applications. Upon completion, students should be able to create and maintain a dynamic website.

**Prerequisites**

Take CIS-115

**WEB 182 – PHP Programming** 2 2 0 0 3

This course introduces students to the server-side, HTML-embedded scripting language PHP. Emphasis is placed on programming techniques required to create dynamic web pages using PHP scripting language features. Upon completion, students should be able to design, code, test, debug, and create a dynamic web site using the PHP scripting language.

**Prerequisites**

Take CIS-115

**WEB 186 – XML Technology** 2 2 0 0 3

This course is designed to introduce students to XML and related internet technologies. Topics include extendible style language (XSL) document object model (DOM), extendible stylesheet language transformation (XSLT), and simple object access protocol (SOAP). Upon completion, students should be able to create a complex XML document.

**Prerequisites**

Take CIS-115

**WEB 187 – Programming for Mobile Devices** 2 2 0 0 3

This course introduces content development for mobile electronic devices with a focus on business-related, social media, and entertainment applications. Emphasis is placed on developing web content and creating applications for mobile devices, including internet/business practices and techniques for delivery on mobile platforms. Upon completion, students should be able to develop web content and business or entertainment applications for use on mobile electronic devices.

**Corequisites**

CSC-151

**Prerequisites**

Take CIS-115

**WEB 210 – Web Design** 2 2 0 0 3

This course introduces intermediate to advanced web design techniques. Topics include customer expectations, advanced markup language, multimedia technologies, usability and accessibility practices, and techniques for the evaluation of web design. Upon completion, students should be able to employ advanced design techniques to create high impact and highly functional web sites.

**Prerequisites**

Take WEB-115

**WEB 211 – Advanced Web Graphics** 2 2 0 0 3

This course covers the advanced concepts related to the creation and manipulation of graphic images for web delivery. Topics include graphics acquisition, use of masks and channels, advanced special effects, advanced photo manipulation, and other related topics. Upon completion, students should be able to create, manipulate, and optimize web graphics with advanced techniques and maintain an online coursework portfolio.

**Prerequisites**

Take WEB-111

**WEB 214 – Social Media** 2 2 0 0 3

This course introduces students to social media for organizations. Topics include social media, marketing strategy, brand presence, blogging, social media analytics and technical writing. Upon completion, students should be able to utilize popular social media platforms as part of a marketing strategy, and work with social media analytics tools.

**WEB 215 – Advanced Markup and Scripting** 2 2 0 0 3

This course covers advanced programming skills required to design Internet applications. Emphasis is placed on programming techniques required to support Internet applications. Upon completion, students should be able to design, code, debug, and document Internet-based programming solutions to various real-world problems using an appropriate programming language.

**Prerequisites**

Take WEB-115

**WEB 220 – Advanced Multimedia** 2 2 0 0 3

This is the second of two courses covering internet multimedia. Topics include use of advanced internet multimedia applications. Upon completion, students should be able to create interactive Internet multimedia presentations.

**Prerequisites**

Take WEB-120

**WEB 225 – Content Management Systems** 2 2 0 0 3

This course introduces students to Content Management Systems (CMS) designed for the publication of Web content to Web sites. Topics include individual user accounts, administration menus, RSS-feeds, customizable layout, flexible account privileges, logging, blogging systems, creating online forums, and modules. Upon completion, students should be able to register and maintain individual user accounts and create a business website and/or an interactive community website.

**Prerequisites**

Take WEB-110

**WEB 250 – Database Driven Websites** 2 2 0 0 3

This course introduces dynamic (database-driven) website development. Topics include the use of basic database CRUD statements (create, read, update and delete) incorporated into web applications, as well as in software architecture principles. Upon completion, students should be able to design and develop database driven web applications according to industry standards.

**Prerequisites**

Take DBA-110

**WEB 251 – Mobile Application Development II** 2 2 0 0 3

This course covers advanced applications and custom programming to develop applications for mobile devices. Topics include device capabilities, OS specific Software Development Kits (SDK), scripting for functionality and designing interactivity. Upon completion, students should be able to demonstrate effective programming techniques to develop advanced mobile applications.

**Prerequisites**

Take WEB-151

**WEB 285 – Emerging Web Technologies** 2 2 0 0 3

This course will explore, discuss, and research emerging technologies in the web arena. Emphasis is placed on exposure to up-and-coming technologies relating to the web, providing hands-on experience, and discussion of practical implications of these emerging fields. Upon completion, students should be able to articulate issues relating to these technologies.

**WEB 287 – Web E-Portfolio** 1 2 0 0 2

This course covers the creation and organization of a web-based e-portfolio that includes a resume, references, and comprehensive academic and work samples. Emphasis is placed on creating an e-portfolio with solid design and demonstrable content, the production of a resume and self-promotional materials, and interview techniques. Upon completion, students should be able to present their own domain with included professional e-portfolio elements of resume, sample work, and related self-promotional materials.

## WLD – Welding

### WLD 110 – Cutting Processes 1 3 0 0 2

This course introduces oxy-fuel and plasma-arc cutting systems. Topics include safety, proper equipment setup, and operation of oxy-fuel and plasma-arc cutting equipment with emphasis on straight line, curve and bevel cutting. Upon completion, students should be able to oxy-fuel and plasma-arc cut metals of varying thickness.

### WLD 111 – Oxy-Fuel Welding 1 3 0 0 2

This course introduces the oxy-fuel welding process. Topics include safety, proper equipment setup, and operation of oxy-fuel welding equipment with emphasis on bead application, profile, and discontinuities. Upon completion, students should be able to oxy-fuel weld fillets and grooves on plate and pipe in various positions.

### WLD 112 – Basic Welding Processes 1 3 0 0 2

This course introduces basic welding and cutting. Emphasis is placed on beads applied with gases, mild steel fillers, and electrodes and the capillary action of solder. Upon completion, students should be able to set up welding and oxy-fuel equipment and perform welding, brazing, and soldering processes.

### WLD 115 – SMAW (Stick) Plate 2 9 0 0 5

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.

**Corequisites**

WLD-110

### WLD 115AB – SMAW (Stick) Plate 1 4.5 0 0 2.5

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.

**Corequisites**

Take WLD-110

### WLD 115BB – SMAW (Stick) Plate 1 4.5 0 0 2.5

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.

**Corequisites**

Take WLD-110

**Prerequisites**

Take WLD-115AB

### WLD 116 – SMAW (stick) Plate/Pipe 1 9 0 0 4

This course is designed to enhance skills with the shielded metal arc (stick) welding process. Emphasis is placed on advancing manipulative skills with SMAW electrodes on varying joint geometry. Upon completion, students should be able to perform groove welds on carbon steel with prescribed electrodes in the flat, horizontal, vertical, and overhead positions.

**Prerequisites**

Take WLD-115

### WLD 121 – GMAW (MIG) FCAW/Plate 2 6 0 0 4

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.

**Corequisites**

Take WLD-110

### WLD 122 – GMAW (MIG) Plate/Pipe 1 6 0 0 3

This course is designed to enhance skills with the gas metal arc (MIG) welding process. Emphasis is placed on advancing skills with the GMAW process making groove welds on carbon steel plate and pipe in various positions. Upon completion, students should be able to perform groove welds with prescribed electrodes on various joint geometry.

**Prerequisites**

Take WLD-121

**WLD 131 – GTAW (TIG) Plate** 2 6 0 0 4

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.

**Corequisites**

Take WLD-110

**WLD 132 – GTAW (TIG) Plate/Pipe** 1 6 0 0 3

This course is designed to enhance skills with the gas tungsten arc (TIG) welding process. Topics include setup, joint preparation, and electrode selection with emphasis on manipulative skills in all welding positions on plate and pipe. Upon completion, students should be able to perform GTAW welds with prescribed electrodes and filler materials on various joint geometry.

**Prerequisites**

Take WLD-131

**WLD 141 – Symbols and Specifications** 2 2 0 0 3

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

**WLD 143 – Welding Metallurgy** 1 2 0 0 2

This course introduces the concepts of welding metallurgy. Emphasis is placed on basic metallurgy, effects of welding on various metals, and metal classification and identification. Upon completion, students should be able to understand basic metallurgy, materials designation, and classification systems used in welding.

**WLD 151 – Fabrication I** 2 6 0 0 4

This course introduces the basic principles of fabrication. Emphasis is placed on safety, measurement, layout techniques, cutting, joining techniques, and the use of fabrication tools and equipment. Upon completion, students should be able to perform layout activities and operate various fabrication and material handling equipment.

**Prerequisites**

Take WLD-110 WLD-115 WLD-121 WLD-141

**WLD 215 – SMAW (stick) Pipe** 1 9 0 0 4

This course covers the knowledge and skills that apply to welding pipe. Topics include pipe positions, joint geometry, and preparation with emphasis placed on bead application, profile, and discontinuities. Upon completion, students should be able to perform SMAW welds to applicable codes on carbon steel pipe with prescribed electrodes in various positions.

**Prerequisites**

Take WLD-115 or WLD-116; Take WLD-115 and WLD-116;

**WLD 221 – GMAW (MIG) Pipe** 1 6 0 0 3

This course covers the knowledge and skills that apply to welding pipe. Topics include pipe positions, joint geometry, and preparation with emphasis placed on bead application, profile, and discontinuities. Upon completion, students should be able to perform GMAW welds to applicable codes on pipe with prescribed electrodes in various positions.

**Prerequisites**

Take WLD-122

**WLD 231 – GTAW (TIG) Pipe** 1 6 0 0 3

This course covers gas tungsten arc welding on pipe. Topics include joint preparation and fit up with emphasis placed on safety, GTAW welding technique, bead application, and joint geometry. Upon completion, students should be able to perform GTAW welds to applicable codes on pipe with prescribed electrodes and filler materials in various pipe positions.

**Prerequisites**

Take WLD-132

**WLD 251 – Fabrication II** 1 6 0 0 3

This course covers advanced fabrication skills. Topics include advanced layout and assembly methods with emphasis on the safe and correct use of fabrication tools and equipment. Upon completion, students should be able to fabricate projects from working drawings.

**Prerequisites**

Take WLD-151

**WLD 261 – Certification Practices** 1 3 0 0 2

This course covers certification requirements for industrial welding processes. Topics include techniques and certification requirements for prequalified joint geometry. Upon completion, students should be able to perform welds on carbon steel plate and/or pipe according to applicable codes.

**Prerequisites**

Take All: WLD-115, WLD-121, and WLD-131

**WLD 262 – Inspection and Testing** 2 2 0 0 3

This course introduces destructive and non-destructive testing methods. Emphasis is placed on safety, types and methods of testing, and the use of testing equipment and materials. Upon completion, students should be able to understand and/or perform a variety of destructive and non-destructive testing processes.

**WLD 265 – Automated Welding/Cutting** 2 6 0 0 4

This course introduces automated welding equipment and processes. Topics include setup, programming, and operation of automated welding and cutting equipment. Upon completion, students should be able to set up, program, and operate automated welding and cutting equipment.

**Prerequisites**

Take All: WLD-110 and WLD-121



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