This catalog is intended for informational purposes only. Changes in requirements, rules, fees, procedures, courses, and informational statements may occur after the publication of this catalog. Efforts will be made to keep changes to a minimum, but the college reserves the right to revise any part or section as may be required.
Nondiscrimination Statement

Caldwell Community College and Technical Institute is dedicated to equality of opportunity for its staff and students. CCC&TI does not discriminate against students, employees, or applicants on the grounds of race, color, religion, age, sex, national origin, or disability.

CCC&TI is committed to this policy. Caldwell Community College and Technical Institute supports the protection of citizens by all applicable Federal Laws including Title VI and Title VII of the Civil Rights Act of 1964, Equal Pay Act of 1963, Title IX of the 1972 Education Amendments, Executive Order 11246 as amended by 11375 Title VII (Section 799A) and Title VIII (Section 845) of the Public Health Service Act, Age Discrimination Act, the Rehabilitation Act of 1973, and the Americans with Disabilities Act of 1991.

Sexual harassment shall be deemed a form of discrimination based on sex as prohibited by Section 703 of Title VII of the Civil Rights Act, and North Carolina General Statute 126-16 (in the case of employees), and Title VI of the Education Amendments Act of 1972 (in the case of students). Sexual harassment is defined as deliberate, unsolicited, unwelcome verbal and/or physical conduct of a sexual nature or with sexual implications. Any member of Caldwell Community College and Technical Institute believing he or she has been discriminated against or desiring more information concerning these provisions should contact: Mark Barber, Director of Human Resources, and/or David Shockley, Vice President of Student Services, Coordinator of Title IX and/or Section 504.
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2004-05 Academic Calendar

Fall Semester 2004
Monday, August 9 .......................................................... Employee Kick-off Day
Tuesday, August 10 ........................................ Registration Caldwell Campus
Thursday, August 12 ................................................ Registration Watauga Campus
Wednesday, August 18 ........................................ Curriculum Classes Begin
August 18, 19 ........................................ Schedule Change Period (Currently Enrolled Students Only)
Monday, September 6 ...................................................... Labor Day Holiday
Tuesday, September 7 ................................................ Curriculum Classes Resume
Wednesday, October 27 ................................ Last Day for Students to Drop Classes for Regular Session
October 11-12 ................................................................. Student Fall Break
November 1-5 & 8-12 ...... Advisement/Registration for Current Students for Spring Semester (Both Campuses)
Tuesday, November 23 ................................ Thanksgiving Holidays Begin After Last Class
November 25, 26 ................................................ Institution Closed for Thanksgiving Holidays
Monday, November 29 ........................................ Classes Resume
December 15 ................................................................. End of Fall Semester
December 23-24, 27-28 ................................ Employee Holidays/Institution Closed
December 29-30 .......................................................... Institution Closed/Utilize Annual Leave Days

Spring Semester 2005
Friday, December 31 ................................................ Institution Closed for New Year’s Holiday
Tuesday, January 4 ........................................................ Registration Caldwell Campus
Wednesday, January 5 ................................................ Registration Watauga Campus
Monday, January 10 ................................................ Classes Begin
January 10, 11 ........................................................ Schedule Change Period (Currently Enrolled Students Only)
Monday, January 17 ................................................ Martin Luther King, Jr. Holiday
Tuesday, January 18 ................................................ Classes Resume
March 7-11 ................................................................. Student Spring Break
Friday, March 25 .................................................... Employee Holiday/Institution Closed
March 28, 29 ........................................................ Student Easter Holiday (snow makeup if required)
Wednesday, March 30 ........................................ Curriculum Classes Resume
Friday, April 1 ........................................................ Last Day for Students to Drop Classes for Regular Session
April 4-8 ........................................................... Advisement/Registration for Current Students for Summer Semester (Caldwell Campus)
April 4-8, 11-15 ................................................ Advisement/Registration for Current Students for Summer Semester (Watauga Campus)
Wednesday, May 13 ................................................... Exams, End of Spring Semester
Summer Session 2005 (10 weeks)

Thursday, May 19 .....................................................GED/Adult High School Graduation (Civic Center)
Friday, May 20 .................................................................Curriculum Graduation (Civic Center)
Monday, May 23 ...............................................................Registration Caldwell Campus
Tuesday, May 24 ............................................................Registration Watauga Campus
Thursday, May 26 ..............................................................Classes Begin
May 25-27, 30 ..............................................................Schedule Change Period (Currently Enrolled Students Only)
Friday, June 24 ..................................................Last Day for Students to Drop Classes for Regular Session
Monday, July 4 ...............................................................Institution Closed for Fourth of July Holiday
Tuesday, July 5 .................................................................Student Holiday for Fourth of July
Wednesday, July 6 ..........................................................Classes Resume
July 11-15 & 18-22 ........................................Advisement/Registration for Current Students for Fall Semester
(Both Campuses)
Wednesday, Aug. 3 .............................................................Exams, End of Summer Semester
General Information

History of the College

The 1963 North Carolina General Assembly passed the Community College Act creating a system of comprehensive community colleges, technical institutes, and industrial education centers in the state under the State Board of Education. The 1979 General Assembly rewrote the Community College Act and authorized a new board for community colleges, effective January 1, 1981.

The establishment of Caldwell Technical Institute was tentatively approved by the State Board of Education in January, 1964. The people of Caldwell County approved the college on March 28, 1964, through a bond vote of $600,000. The monies funded purchase of a site, construction of facilities, and up to five cents tax authorization for college operations. Final approval by the State Board of Education followed on April 2, 1964. The first president, Dr. H. Edwin Beam, was selected that fall and began work in November, 1964.

Classes in health occupations began at a temporary site in 1965 with the first full year of classes held in 1966-67. A permanent site was selected for the institute in January, 1965, and an architect was selected the following month. New facilities were occupied in September, 1967.

On July 1, 1970, Caldwell Technical Institute was authorized by the North Carolina General Assembly through the State Board of Education to offer college transfer courses. Subsequently, Caldwell Technical Institute changed its name to Caldwell Community College and Technical Institute.

A referendum seeking approval of the issuance of $800,000 in bonds by Caldwell County was proposed and voted upon on December 7, 1971. The local money was to match a federal grant of $799,306 under the Appalachian Region Act. This referendum was passed by more than a 2 to 1 majority.

In 1973, the institution received $500,000 in state construction funds from an appropriation by the North Carolina General Assembly. These funds enabled the trustees to increase the size of the college by about 77,000 square feet. The new buildings were occupied during the 1974-75 school year.

In 1979 the Caldwell County Commissioners authorized an expenditure of $600,000 to match a proposed Appalachian Regional Grant of $400,000 to construct additional facilities. These new facilities were occupied in August, 1982. The additional 19,000 square feet made a total of 154,000 square feet of building space at the institution. In September, 1973, the Watauga Division of Caldwell Community College and Technical Institute was established to provide limited credit and more extensive non-credit offerings in various locations throughout the county to the citizens of Watauga County. Appalachian State University permits the Caldwell Community College and Technical Institute Watauga students to use the university’s library facilities.

Dr. H. Edwin Beam retired June 30, 1984, after 20 years of service. Dr. Eric B. McKeithan was appointed July 1, 1984, to begin his term as second president. The General Assembly appropriated $250,000 to the college during the short session of 1984. These funds were combined with $129,000 in local appropriations, and a
6200-square-foot addition was added to E-building to provide state-of-the-art facilities for the nursing, occupational therapy assistant, and physical therapist assistant training programs.

In the spring of 1987, the Watauga County Commissioners renovated a 6800-square-foot former child care center and turned the facility over to the Watauga campus of Caldwell Community College and Technical Institute. With seven classrooms, a kitchen, and space for a Small Business Center, a Career Center, a computer lab, and offices, this facility, which was called the Watauga Business Center, provided the college with much-needed space for day-time programming, as well as additional space for evening classes.

On June 6, 1986, the voters of Caldwell County approved a bond referendum of $3.4 million for Caldwell Community College and Technical Institute to construct a job training center ($1.9 million) and a civic center ($1.5 million in bonds to be matched by $1.5 million in funds from other sources). In July of 1986, the General Assembly appropriated $100,000 in capital funds to Caldwell Community College and Technical Institute. Another $1.49 million was appropriated by the General Assembly in August 1987.

In July of 1988, the North Carolina General Assembly designated $100,000 for the design of the first permanent building on a Watauga County campus. In November of 1988, the Watauga County Commissioners purchased a 39-acre site for the Watauga campus of Caldwell Community College and Technical Institute. The campus is located west of Boone on the 105-421 bypass.

The Job Training Center on the Caldwell campus was completed in April of 1989 and was named the E. M. Dudley Job Training Center by the Board of Trustees. In June of 1989, the college purchased a former showroom of Fairfield Chair Company, containing 23,250 square feet, and 13.3 acres of land on which the J.E. Broyhill Civic Center was constructed. In August 1989, the North Carolina General Assembly appropriated $100,000 in capital constructions funds for the college to use on the civic center project. In July of 1991, the college purchased a lot adjoining the civic center. The civic center opened in October of 1993.

In July of 1989, the college purchased 20.3 acres of property adjoining the main Caldwell Campus for future development. A 1,600 square foot addition to the gym was completed in October of 1991, and construction of a 12,000 square foot maintenance building for the Caldwell campus was completed in August of 1992.

In November of 1993, a $250 million statewide community college bond referendum was approved by North Carolina voters. Of $8,361,539 earmarked for Caldwell Community College and Technical Institute, $2,261,539 was reserved by trustees to construct classrooms and laboratories for the Watauga campus, and $6.1 million was set aside to construct classrooms, laboratories, and instructional support facilities on the Caldwell campus.

After serving as the second president of Caldwell Community College and Technical Institute for ten years, Dr. Eric McKeithan resigned on July 9, 1994 to become president of another community college in North Carolina. Dr. H. Edwin Beam served as interim president until the selection of Dr. Kenneth A. Boham who became the third president of Caldwell Community College and Technical Institute on July 1, 1995.

Design of the college’s first permanent site in Watauga County was underway in
fall 1995. Construction began in 1996, and the new 23,000 square foot facility was completed two years later. Overlooking mile-high Grandfather Mountain, the new CCC&TI Watauga campus opened its doors to the community in January 1998 with expanded course offerings and consolidated services. Continuing Education, Student Support and Basic Skills centers remain located at other sites throughout Watauga County.

Caldwell County voters approved two important bond referenda in February 1997. A $1.59 million bond resulted in the establishment of a college-wide fiber optic network, additional classrooms, renovations to existing classrooms and buildings, updated instructional equipment, additional parking and a campus alarm system. The Caldwell Campus facility known as F Building opened in August, 1998. The 45,000 square foot building currently houses Student Services, Computer Services and health sciences classrooms and laboratories.

In May 1999, CCC&TI acquired the gift of the 58-year old Broyhill Family home. The 12-acre estate, originally deeded to the late Satie Broyhill, consists of 34 rooms encompassing approximately 8,000 square feet in addition to its extensive grounds and an olympic size swimming pool.

In fall 1999, a new Career Center was established on college’s Caldwell campus. A joint venture among the public school system, CCC&TI and local employers, the Career Center benefits the county with focused and cooperative resources for skilled trade and technical occupations. Participants include students from three area high schools during the day while CCC&TI students utilize the facility for evening classes. Currently the first in the state to offer this unique training concept, the Career Center was funded by a separate $2.6 million referendum for the Caldwell County public schools in 1997. The 25,000 square foot facility was dedicated in March, 2000.

CCC&TI was the recipient of two major grants in summer of 2000. The U.S. Department of Education’s Title III Grant, totaling $1,734,110, will allow the college to link to the NC Information Highway, allowing for the installation of three interactive classrooms, an instructional production facility, support personnel and comprehensive technological training for faculty. NC’s House Bill 275 was also awarded to CCC&TI in partnership with the Caldwell County Career Center and business/industry partners. The grant will provide the means for development of a comprehensive website for the Career Center. Linked to CCC&TI’s website, the new web page will connect resources from across the state, providing interactivity among students, instructors and advisors.

Caldwell and Watauga county voters approved the largest state bond referendum in the history of the community college system in November of 2000. CCC&TI’s portion, totaling $7,031,341, includes provisions for construction and renovation on both campuses. Major projects include: Caldwell Campus – distance learning classrooms, site preparation for future instructional facility, auto body shop spray booth, institutional climate control system, civic center renovations, additional parking and relocation of the truck driver training range and miscellaneous repairs; Watauga Campus – occupational training building, Continuing Education Center renovations, physical education area, additional classroom space, site preparation for future facility and additions to the existing instructional facility. The projects will be completed over the next 6 years as bond monies are allocated.
Construction plans for an ASU Center on the Caldwell Campus of CCC&TI have begun, making a bachelor’s degree more accessible for local residents. Launched with the help of a one million dollar donation from the Broyhill Family Foundation, along with federal monies and local support pledged by Caldwell County commissioners, the center will be named in honor of Faye A. Broyhill. Based on the agreement signed in June 2003, CCC&TI will share facilities and resources with Appalachian State University for a minimum of ten years. Scheduled for completion in spring 2006, the center will have an initial emphasis on teacher education. The venture will position CCC&TI as a state and national model, providing a seamless education path with a high school, community college and university presence all on the same property.

Renovations to conference facilities at the J.E. Broyhill Civic Center will be completed June 2004. The expansion, funded by the 2000 bond monies, includes more flexible meeting space and break-out rooms, a hospitality lab, a concession area and updates to the lobby. The first phase of expansion efforts on CCC&TI’s Watauga Campus, also funded with bond monies, will be completed by fall semester 2004. Four modular units will consolidate student services and basic skills at the instructional facility and include, a new bookstore, maintenance/storage facility and additional parking.
Location

Caldwell Community College and Technical Institute is located on 98.3 acres off Highway 321 in Hudson, North Carolina, accessible to the population centers of Lenoir (5 miles), Granite Falls (5 miles), and Hickory (10 miles). The college’s J. E. Broyhill Civic Center is located on 14.4 acres on U. S. 321, 2.5 miles north of the Caldwell campus. In Watauga County, the college has its main instructional facility, student services and basic skills center off Highway 105 on Community College Drive. The Corporate and Continuing Education Center is located on Bamboo Road in Boone.

Institutional Mission

(Approved by the Board of Trustees October 9, 2003)

CCC&TTI is a public, comprehensive post-secondary institution whose primary service area is Caldwell and Watauga Counties. Operating under the legal framework of the State of North Carolina and in partnership with the NC Community College System, CCC&TTI is an open-door institution which values the diversity of its constituencies and offers equal opportunities.

The mission of CCC&TTI is to
- Provide accessible, quality instruction;
- Support economic development through comprehensive resources to business, industry, and agencies;
- Offer diverse services and opportunities which improve the quality of life.

Core Values for Planning and Improvement

CCC&TTI is committed to continuously improving both the quality of teaching and learning for our students and to improving the effectiveness of our services. As an educational community, we believe that all students, employees and supporting constituencies must have an “expectation of excellence” and must join together to constantly improve the environment in which they work and learn.

Accreditation

Caldwell Community College and Technical Institute is accredited by the Commission on Colleges of the Southern Association of Colleges and Schools (1866 Southern Lane, Decatur, Georgia 30033-4097 Telephone: (404)679-4501) to award associate degrees.

Diploma, Associate in Applied Science, Associate in Arts, Associate in Fine Arts and Associate in Science programs have been approved by the North Carolina Department of Community Colleges and the State Board of Community Colleges.
The Basic Law Enforcement Training program is accredited by the North Carolina Department of Justice, Criminal Justice Education and Training Standards Commission (P.O. Drawer 149, Raleigh, NC 27603. Telephone: (919) 716-6470. Fax: (919) 716-6752.)

The medical sonography and cardiovascular sonography programs are accredited by the Joint Review Committee on Education in Diagnostic Medical Sonography (7108-C S. Alton Way, Suite 150; Englewood, Colorado 80112-2106).

The radiography program is accredited by the Joint Review Committee on Education in Radiologic Technology (20 N. Wocker Drive, Suite 900, Chicago, IL 60606-2901. Telephone Number (312) 704-5300.)

The nuclear medicine program is accredited by the Joint Review Committee on Educational Programs in Nuclear Medicine Technology (JRCNMT) (#1 2nd Avenue East, Suite C, Polson, Montana 59860-2320 Telephone: (406)883-0003) E-mail: jrcnmt@ptinet.net.

The nursing program is approved by the North Carolina Board of Nursing (PO Box 2129, Raleigh, NC 27602-2129. Telephone number (919) 782-3211) and is also seeking accreditation from the National League for Nursing Accrediting Commission - 61 Broadway, 33rd floor, New York, New York 10006. Telephone number (212) 363-5555 Ext. 153.

The pharmacy technology program is accredited by the American Society of Health-system Pharmacists (7272 Wisconsin Avenue, Bethesda, Maryland 20814. Telephone: (301) 657-3000.)

The physical therapist assistant program is accredited by the Commission on Accreditation in Physical Therapy Education of the American Physical Therapy Association (1111 N. Fairfax Street, Alexandria, Virginia 22314 Telephone Number (703) 706-3245).

The ophthalmic medical assistant program has applied for initial approval by the Committee on Accreditation for Ophthalmic Medical Personnel (CoA-OMP) - 2025 Woodlane Drive, St. Paul, Minnesota 55125-2995, telephone: (651) 731-2944, fax: (651) 731-0410

The speech language pathology assistant program is regulated by North Carolina Board of Examiners for Speech and Language Pathologists and Audiologists (P. O. Box 16885, Greensboro, N. C. 27416-0885 Telephone: 336-272-1828)

Student Success Rates

Prospective and current students who would like information concerning graduation rates, students’ satisfaction with the college, and students’ goal attainment, may request such information from Student Services.
Admissions

General Admission Requirements
Caldwell Community College and Technical Institute is a co-educational college open to any individual meeting the admission requirements for the particular course or area in which that individual wishes to enroll. These requirements vary with the areas of study offered by the college. Students wishing to enroll in a curriculum program at CCC&TI should contact the Student Services office for application forms, interview appointments and dates for placement testing. All technical and college transfer programs require high school graduation or the equivalent. Students enrolled in the vocational programs must be 18 years of age or high school graduates.

Applicants to CCC&TI should:
• Secure application forms and make application for admission.
• Request that a transcript of past high school and college work be submitted to the Student Services office.
• Complete the required placement tests for specific programs.
• Have an interview with a member of the Student Services office.

Students who are not entering programs need to submit only an application for the admissions process unless they are registering for courses which have prerequisites. If the courses have prerequisites, students must take the appropriate placement tests and/or furnish official transcripts.

Health Sciences Program Policies
Additional departmental policies and procedures, including student retention and readmission, are available in the various departments and will be provided for each student following admission to the designated program. Clinical laboratory experiences are provided through the utilization of area institutions, clinics, agencies, and physicians’ offices. Each student is responsible for providing transportation to the clinical site.

Students also provide their own uniforms consistent with the department uniform guidelines. No student will be considered a nursing student, a cardiovascular sonography student, a radiography student, a medical sonography student, a nuclear medicine student, a physical therapist assistant student, a speech language pathology assistant student, a computed tomography and magnetic technology student, or an ophthalmic medical assisting student at CCC&TI until official notification of admission is granted through the mail by the director of admissions and records. See specific programs of study for any special admissions requirements.
Student Status

New Students
An orientation course is available to all new students entering Caldwell Community College. The course, ACA 111, College Student Success, assists the students in becoming acquainted with programs, policies, facilities, and personnel on the campus. It is a required course for students in certain programs.

Transfer Students
A transfer student is a student entering Caldwell Community College and Technical Institute who has earned credit at another institution and wishes to apply these credits toward a CCC&TI degree or diploma. In addition to submitting all other application materials, students desiring to transfer credits must have all official transcripts sent to CCC&TI by the institutions which originally granted the credit. To be considered for CCC&TI credit, courses must have been taken at a regionally accredited institution and must show a grade of “C” or better. Certain exceptions may be made. Notification of transfer credit granted will be mailed to the student prior to the end of the first semester of enrollment. If applicable credit has been accepted from another institution, transfer students may be exempt from some of the admission placement tests. A grade point average for graduation, honors, and continuing enrollment is computed only for courses taken at CCC&TI. For information on advanced standing by placement, see Credit by Examination.

High School Students
High school students who want to take a course are encouraged to see their guidance counselor. High school students may enroll in a course or courses if:

- they are 16 years of age or older.
- CCC&TI officials give permission.
- they meet the necessary prerequisites.
- their high school principal or designee gives permission.

An applicant not attending high school who is between the ages of sixteen and eighteen years and who has special educational needs may be admitted to appropriate courses or programs provided:

- The applicant has left the public schools no less than six calendar months prior to the last day of regular registration of the semester.
- The application is supported by a notarized petition of the applicant’s parent, legal guardian, or other person or agency having legal custody and control, which petition certifies the place of residence and date of birth of the applicant, the parental or other appropriate legal relationship of the petitioner to the applicant, and the date on which the applicant left the public schools. However, all or any part of the six-month waiting period may be waived by the superintendent of public schools of the administrative unit in which the applicant resides.
- Such admission will not pre-empt institution facilities and staff to such an extent as to render the institution unable to admit all applicants who graduated from high school or who are eighteen years of age or older.
Intellectually Gifted and Mature Students Under 16 Years Old

The 2001 Session of The NC General Assembly enacted House Bill 1246 that amended Chapter 115D of the General Statutes by adding a new section 115D-1.1 to allow a student under the age of 16 to enroll in a community college if the president of the college or the president’s designee finds that the student is intellectually gifted and has the maturity to justify admission to the college.

A. Student Eligibility:
   (1) The student must be identified as intellectually gifted and having the maturity to justify admission to the community college.
   (2) The student must receive approval of the appropriate person designated in paragraph D (4) below.
   (3) The student must meet course prerequisites and placement testing requirements.
   (4) The student and parent must interview with the President’s designee to determine appropriateness of maturity level.

B. Course Eligibility:
   Major and general education courses numbered 100 and above from the Common Course Library are eligible for the enrollment of intellectually gifted and mature students.

C. Other Operating Procedures:
   (1) Registrations of students under 16 years old are to be reported to the System Office using the regular curriculum student reporting information system.
   (2) When the student completes the course or withdraws therefrom, that fact plus the grade received are to be reported to the System Office.
   (3) Any student under the age of 15 shall be accompanied at all times when on the campus of Caldwell Community College and Technical Institute by a parent or another adult consented to and designated by the parent in writing.
   (4) Students enrolled under this section will pay appropriate tuition and fees.

D. Required Documentation:
   (1) Aptitude test scores from a System Office approved list of tests taken within three years before the date of admission that include composite or sub-test scores documenting percentile ranges from 92% through 99%, and
   (2) Achievement test scores from a System Office approved list of tests taken within three years before the date of admission that include composite or sub-test scores documenting percentile ranges from 92% through 99%, and
   (3) Any costs associated with aptitude and achievement testing are the responsibility of the student.
   (4) A completed approval form from one of the following:
       a. The local board of education, or the board’s designee, for the public school administrative unit in which the student is enrolled.
       b. The administrator, or administrator’s designee, of the nonpublic school in which the student is enrolled.
       c. The person who provides the academic instruction in the home school in which the student is enrolled.
       d. The designee of the board of directors of the charter school in which the student is enrolled.
Special Students
Students who are taking one or more curriculum credit courses but who are not enrolled in a degree, diploma or certificate program are called “Special Studies students.” For admission, Special Studies students need only to complete the application available in Student Services. Special Studies students may register for any course, provided they meet prerequisite requirements for the course(s). Special Studies students will pay the same tuition and fees as students in programs. If a Special Studies student wishes to enter a program at a later date, he/she must complete a “Student Information Change Form” in the Student Services department and complete all admission requirements for that program. Special Studies students are not eligible for any form of financial aid through CCC&TI.

Provisional Students
A student applying too late to complete pre-entrance requirements may be permitted to enter the college as a provisional student. Provisional students must complete all requirements within the first semester of attendance.

Visiting Students
A student working toward a degree in another institution may take courses at Caldwell Community College and Technical Institute for transfer. The student must complete the application form and should obtain written permission from the degree institution stating that the courses at CCC&TI will be acceptable toward degree requirements. It is the responsibility of the student to request IN WRITING that an official transcript from CCC&TI be sent to the degree institution.

International Students
Caldwell Community College and Technical Institute is authorized by the U.S. Citizenship and Immigration Services to admit international students. This permission was granted on July 12, 1966, with authorization number WAS 214-1562. International students must meet the same admission requirements as all other students, as well as meeting requirements specified by immigration. Included with the application should be a transcript from an authorized high school. If this document is not in English, it should be translated and certified before being sent to CCC&TI. Credits transferred from foreign colleges or universities are not accepted. The Test of English as a Foreign Language (TOEFL), with a minimum acceptable score of 500, is required of all applicants as evidence of adequate proficiency in English. The TOEFL scores must be no more than two years old at the time of application for admission.

Students with Disabilities
For the orthopedically impaired, entrance to and movement within buildings can be accomplished with ease through use of ramps, elevators, and electronic door openers. Reserved parking is available near the main ramp and in other designated handicapped parking spaces across campus. Other student conveniences, such as a chair-height card catalog in the library, specially marked directions for the seeing-impaired in the elevators, wheelchair desks in the classrooms, a telephone in the student lounge, TTY public phone, and several drinking fountains in the halls, are provided. Restrooms are available in “E”, “G”, “B”, and “F” Buildings. For those with other impairments, the college makes available special educational aids, such as tutors, interpreters, notetakers, and tape recorders. Students who need special services must arrange for them through the Academic Support Center well in advance of the time such serv-
ices are to begin and must submit appropriate documentation. The college does not assume responsibility for providing personal attendants or services of a personal nature.

Enrollment

In order to guarantee high program standards and student success, it is important that the academic abilities of students be equal to program entrance requirements. The “open door” policy allows all students the opportunity to further their education; however, program entrance requirements must be met. The student advisement program and placement testing assure that students will be enrolled in courses appropriate to their academic abilities. Entrance requirements vary for individual courses and programs. See program and course descriptions in the catalog for prerequisites and entrance requirements.

Advisement

The faculty advisor program is a cooperative effort of the faculty and Student Services. At the time of enrollment, each student is assigned an advisor who will assist that student in planning programs and selecting courses. Student Services counselors serve as advisors to students who are not enrolled in specific programs (Special Studies students). All students should make appointments with their advisors at least once each semester before early registration for the next semester.

Placement Testing

The Accuplacer computerized tests are given to all students who are entering a program, or who are taking courses with a placement test pre-requisite. The tests include reading, sentence skills and math. Students take certain tests, or the whole sequence, depending upon their program or course choices. Students may be exempt from placement testing if:

1. Transfer credits in English and math are accepted.
2. Satisfactory S. A. T. or A. C. T. scores are received.
   a. On S. A. T. tests taken prior to April 1, 1995, satisfactory scores are 500+ in math and 475+ in verbal. On tests taken on or after April 1, 1995, satisfactory scores are 550R+ in math and 550R+ in verbal.
   b. For the A. C. T., scores of 22 on both English and math are required.
3. Evidence is presented of a four-year college degree from a regionally accredited institution. (In certain cases, retesting may be appropriate.)
4. Completion of developmental coursework at an accredited higher education institution with a grade of "C" or higher within three years of the first class day of the semester of initial enrollment at CCC&TI. Determination of which placement test(s) a student can exempt will occur during the transcript evaluation and advisement process. This practice also applies to a student readmitted to CCC&TI.

Refresher Courses

If deficiencies are found in any one area, a counselor will help students select an appropriate refresher course in order to meet necessary program requirements and/or course prerequisites. Refresher courses (developmental studies courses) will not count toward graduation. College transfer and technical students who are deficient in reading must take reading upon enrollment. Vocational students are encouraged to take reading immediately but must take a reading course after completing 12 credit hours.
Academic Standards

Grading System
Official grades are issued for each student at the end of each semester. A student who lacks passing averages at mid-semester should schedule a conference with the instructor and/or faculty advisor. Students enrolled in curriculum program courses will be graded by the grade system shown below and will be assigned a grade point equivalent in quality points (QP) for each semester scheduled.

<table>
<thead>
<tr>
<th>Number</th>
<th>Grade</th>
<th>Grade Point Equivalent</th>
</tr>
</thead>
<tbody>
<tr>
<td>93-100</td>
<td>A - Excellent</td>
<td>4 QP each semester hour</td>
</tr>
<tr>
<td>85-92</td>
<td>B - Good</td>
<td>3 QP each semester hour</td>
</tr>
<tr>
<td>77-84</td>
<td>C - Average</td>
<td>2 QP each semester hour</td>
</tr>
<tr>
<td>70-76</td>
<td>D - Below Average</td>
<td>1 QP each semester hour</td>
</tr>
<tr>
<td>&lt;70</td>
<td>F - Unsatisfactory</td>
<td>0 QP each semester hour</td>
</tr>
</tbody>
</table>

Grade Codes
AC Advanced Credit - No quality points given.
AP Advanced Placement - No quality points given.
AU Audit - Indicates no grade or credit given.
CR Credit by examination - No quality points given; reflects competence of “C” level or better.
CS Continued study to meet course objectives.
I Incomplete - Indicates failure to complete certain course requirements because of extenuating circumstances.
NA Never Attended.
NG No grade available.
P Pass - No quality points; reflects competence of “C” level or better.
TR Transfer Credit.
W Student withdrew from the course.

Academic Integrity Policy
It is the responsibility of every student, staff member, and instructor at CCC&TI to maintain the highest standards of academic integrity. For this reason, the college will not tolerate any instance of plagiarism or cheating, or any act which violates standards necessary to maintain academic dishonesty. Violations of the college’s Academic Integrity Policy include, but are not limited to, cheating, plagiarism, abuse of academic materials, and participation in an act of academic dishonesty.

Cheating includes taking, possessing, or using any academic material (test information, research papers, notes, etc.) without permission; receiving or giving help during tests; copying or attempting to copy another person’s paper, exam or other graded work; or allowing another to copy such paper, exam or graded work.

Plagiarism is defined as representing as one’s own another’s work or ideas, or any part thereof, published or unpublished. It includes copying a phrase, sentence, or passage
from another’s work and not identifying or citing that source; failing to cite a source fully’ inadequate paraphrasing or summarizing; or attempting to pass off as one’s own a paper written by another.

Violations of this policy will result in failure of the course and academic probation for one semester. Subsequent violations will result in suspension or expulsion from the college.

**Advanced Credit**

As a result of articulation efforts between Caldwell Community College and Technical Institute and Caldwell County Schools, certain courses are approved for advanced credit. Upon certification by the high school teacher, appropriate CCC&TI department chair, and director of admissions and records, the grade of AC will be posted on the transcript. Credit hours will be granted, but no quality points will be given.

**Advanced Placement**

The college grants credit for the Advanced Placement Examinations conducted by the College Entrance Examination Board. The grade of AP will be posted on the transcript, and credit hours will be granted, but no quality points will be given.

**Grades of I (Incomplete)**

An “I” grade in a course indicates the student is making satisfactory progress at the end of the semester but, because of extenuating circumstances, is unable to complete the course requirements. When an incomplete is given, a form outlining the work to be completed must be signed by the instructor and the appropriate department chair. A copy of the form will be submitted to Student Services with the end-of-semester grades. All work must be completed by the end of the following semester (by the end of the following fall semester for an incomplete received during spring semester). At that time, the incomplete must be changed to a letter grade by the instructor. Veterans should check with the veterans’ coordinator in the Student Services department upon receiving an “I” grade.

**Grades of CS (Continued Studies)**

A “CS” grade in a course indicates that the student must enroll in the course again in order to receive credit. Students enrolled in developmental studies courses may receive a grade of “CS” only two times in any one course. If the student registers and fails to satisfactorily complete the course for a third time, he/she will receive a grade of “F.”

**Withdrawing from Courses and/or School**

Students who withdraw from a class or from college should first consult with their academic advisors and then contact the Director of Admissions and Records in the Student Services department. A student may withdraw from a course and receive a grade of “W” up until sixty percent of the class contact hours have elapsed. After that point, all drops will be initiated by the instructor who may assign a grade of “W” or “F” at the end of the semester. Veterans should check with the veterans’ coordinator in the Student Services department for specific VA regulations concerning withdrawals and class repeats.
Financial aid recipients should be aware that withdrawals will affect their “Satisfactory Academic Progress Requirements” and may require a portion of unearned aid to be repaid. Therefore, financial aid recipients should seek advisement from the Financial Aid Office before making any withdrawals.

**Course Repeated for Credit**
When a student repeats a course, the last grade is recorded as the final grade for the course; and only the last hours attempted are counted in determining the student’s grade point average.

**Course Repetition**
Students may take a course a total of three times, including transfer credit, withdrawal and audit. Exceptions to this policy include
- special disabling condition
- change in technology
- student failure of course or to improve grade
- for additional student improvement and learning upon written approval by the appropriate department chair and executive vice-president

Veterans are advised that they cannot receive VA benefits for courses previously passed.

**Auditing**
A student who audits a course pays the regular tuition and activity fees. The audit must be indicated at registration. Students who audit do not take tests or examinations, do not receive grades or credit, and cannot later change an audit to credit. Students who enroll for credit may not change to audit. Audit students are not required to meet attendance requirements. Instructors will drop only audit students who never have attended.

Any student who wishes to audit a physical education course must have the approval of the department chair of humanities/fine arts and social sciences.

**Course Substitutions**
Under special circumstances, a course substitution may be made in a program. Any course substitution must have the written approval of the department chair of the program involved and the vice president of the instructional area. In the event a course has been deleted from a particular program, a course substitution may be used to meet the requirement.

**Credit by Examination (Advanced Placement/College Level Examination Program)**
Students enrolled at CCC&TI who are qualified to accelerate their studies because of their demonstrated abilities may receive credit by examination for some of the curriculum courses. The student wishing to receive credit by examination must petition the department chair under whom the course is offered. If the department chair deems the course suitable for credit by examination, the student may receive permission to take the examination developed by the department chair and appropriate instructors. The department chair will decide the appropriate score demonstrating competence in the
course and, in all courses, the final score must equal a “C,” or better.

For those students in their last semester prior to fulfilling the qualifications for graduation, application for credit by examination must be made at least 20 calendar days prior to the end of the semester. The test must be taken within the next 15 calendar days. Appeals for exception may be made to the executive vice president. If the examination is passed, the student will earn credit hours toward graduation but no quality points. Credit by examination (CR) will be indicated on the student’s transcript. If the examination is not passed, no notation will be made on the transcript.

Students may not use credit by examination to repeat a course, nor may the student repeat the examination. The credit by examination process is used for a student desiring credit for prior learning. The student should contact the appropriate department chair for information on the proficiency examination.

An entering student may receive semester credit hours based on Advanced Placement Examinations of the College Entrance Examination Board (CEEB). These examinations are taken prior to the student’s high school graduation, and the scores must be sent to the admissions office for evaluation. By scoring 3 or higher on the appropriate Advanced Placement Examination, students will be awarded credit for approved courses.

CCC&TI offers college credit for the Subject area examinations included in the College Level Examination Program (CLEP). The student must provide an official copy of the test scores to the admissions office for evaluation. Information on the acceptance scores is available in Student Services.

No more than twenty-five percent of the hours required for a degree, diploma or certificate may be earned by examination, including advanced placement, CLEP, credit by examination, and/or any combination thereof.

Cooperative Education
Cooperative education is designed to give students enrolled in most programs an opportunity to work on a curriculum-related job while completing degree requirements. This combination of classroom instruction and related work experience provides numerous benefits to the student, the college, and employers. Co-op students work in part-time or full-time jobs selected and/or approved by the college. Academic credit is granted for successful work experiences. Interested students should contact the evening/weekend administrator for details.

Independent Study
Eligible students may apply to take a course that is listed in the school catalog but that is not being offered during the designated semester. Students should apply through the Student Services department by completing form CCC-108. Requirements for independent study courses are as follows: student must have a 3.0 program GPA, student must meet with instructor a minimum of one hour per week, course cannot be a lab course, course cannot be a repeat, and student must have approval of department chair.
Class Designation
Students completing 32 semester hours of course work will be listed as sophomores.

Schedule Changes
Change of a student’s schedule after registration has been completed will be made only with permission of the department chair. If enrollment in any class is not deemed sufficient, the college reserves the right to cancel the course.

Academic Progress
CCC&TI’s academic standards policies attempt to maintain academic quality and prevent prolonged failure for all students. Procedures are designed to identify students with academic difficulty and to insure effective and fair corrective action. Maintaining a viable procedure requires the commitment of faculty, staff, and students. The faculty/staff will:
• inform all students of minimum academic standards and grading procedures.
• alert all students of academic difficulty as early in the semester as possible.
• notify all students of their grade-point averages immediately following the semester grade report period. Note: Copies of the policies for specific programs in health sciences are distributed to each student enrolled and are available with each program director and in the office of Student Services.

Academic Probation
A student whose program grade-point average falls below the following standards will be placed on academic probation. (Academic status is based on program grade point averages)

<table>
<thead>
<tr>
<th>Semester Hours Attempted</th>
<th>Associate Degree Grade Point</th>
<th>Diploma Grade Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>4-8</td>
<td>1.00</td>
<td>1.00</td>
</tr>
<tr>
<td>9-16</td>
<td>1.25</td>
<td>1.25</td>
</tr>
<tr>
<td>17-24</td>
<td>1.50</td>
<td>1.50</td>
</tr>
<tr>
<td>25-32</td>
<td>1.75</td>
<td>1.75</td>
</tr>
<tr>
<td>33-40</td>
<td>1.85</td>
<td>2.00</td>
</tr>
<tr>
<td>41-48</td>
<td>1.90</td>
<td></td>
</tr>
<tr>
<td>49-56</td>
<td>1.95</td>
<td></td>
</tr>
<tr>
<td>57-Graduation</td>
<td>2.00</td>
<td></td>
</tr>
</tbody>
</table>

Students on academic probation will be required to develop (in cooperation with their advisors) a plan of corrective action. This plan may include adjustments thought to be helpful, such as counseling, reduced course load, remedial work, tutoring, or work in the learning center.

Academic Suspension
A student who is on academic probation for two or more successive semesters will be subject to a one-semester suspension. A suspension committee composed of the student’s advisor, appropriate department chair, SGA representative, Student Services representative, and a faculty/staff member of the student’s choice will meet immediately following notification of the second-semester probation and determine appropriate
action, i.e., suspension or other action. If suspension is ruled, refund of tuition will be allowed as outlined in the college catalog. A student’s right to appeal any decision is outlined in the grievance procedure printed in this college catalog. A student may automatically enroll for the semester following suspension but will continue to be on probation until his/her program G.P.A. reflects necessary improvements.

Readmission of Dismissed Students
Readmission of dismissed students at a subsequent session will be at the discretion of the college. Students should refer to the student handbook for details on disciplinary procedures and regulations pertaining to suspension and expulsion. A student dismissed from the college for any reason can petition the admissions committee to consider his/her readmission after one semester’s absence following dismissal. Veterans should see the section on academic probation for information concerning the reinstatement of benefits.

Course Load
Students enrolled for 12 or more credit hours are classified as full-time students. Those taking fewer hours are classified as part-time. Normal course load will vary from one curriculum to another and should be carefully planned with advisors. Students may enroll for a maximum load depending upon their capabilities as determined by their advisors. A normal course load is outlined by programs in this catalog. NOTE: Nine (9) hours will be considered full-time for summer semester for insurance purposes only and twelve (12) hours for financial aid purposes.

Student Tutorial Assistance
Special assistance is available for students in all areas of study at the college. Tutors may be assigned to students at no cost to the student. To request a tutor, students should contact the course instructor. Instructors are also available for conferences at regularly scheduled office hours or by appointment. It is the responsibility of the student to seek extra help when needed.

Degree/Diploma/ Certificate Requirements
All students should refer to the college catalog for information about the courses required for graduation in the various areas of study. By conferring with the advisors when questions arise and by following the program check sheets, students will tend to be more accurate in the proper selection of courses. Check sheets are recommended for all students and are required for all veterans. Advisors and counselors are available to students, but final responsibility for meeting program and graduation requirements remains with the student.

Requirements for Graduation
Graduation exercises will be held in May. All candidates are expected to be in attendance. A student is eligible for graduation when the following requirements have been completed:

- The student must file an application for degree/diploma/certificate and pay the fee during the registration period of the last semester the student is in attendance. The graduation fee will be waived for certificate graduates not
attending graduation exercises.

- All the requirements for a degree/diploma/certificate in a particular program must be satisfactorily completed with a program grade-point average of at least 2.0.
- Minimum reading requirements must be completed for each program. Graduates from all vocational programs, including certificates, must have a reading score of 65 or better or must have successfully completed RED 080. Graduates from all technical programs, including certificates, and college transfer programs must have a reading score of 83 or better or must have successfully completed RED 090.
- Students transferring from other colleges and schools are required to complete at least 25 percent of the course hours in residence at CCC&TI. Students in vocational and technical programs must complete a minimum of 10 semester hours in their major areas in residence at CCC&TI. Students in the college transfer programs must complete a minimum of 10 semester hours in their core curriculum in residence at CCC&TI. “In residence” denotes credit hours earned at CCC&TI. Cooperative education will not count toward residency requirements for graduation.
- The student must take care of all financial obligations to CCC&TI.

Honors

President’s Honor List
At the end of each semester, a President’s Honor List will be published to honor those students who:
- are enrolled in a curriculum program,
- have completed a minimum of 12 credit hours (Courses with “CR” or “P” are not applicable.),
- have a grade point average of 4.0,
- have no grades of “I.”

Dean’s Honor List
At the end of each semester, an academic honor list will be published of all students who:
- are enrolled in a curriculum program,
- have completed a minimum of 12 credit hours (Courses with “CR” or “P” are not applicable.),
- have a grade point average of 3.5 or better,
- have no grades of “I.”

Honors List
At the end of each semester, an academic honor list will be published to honor those students who:
- are enrolled in a curriculum program,
- have completed 8 to 11 credit hours (Courses with “CR” or “P” are not applicable.),
- have a grade point average of 3.5 or better
- have no grades of “I.”
Graduation with Honors
A graduating student who has earned a program grade point average of 3.5 or better during studies at Caldwell Community College and Technical Institute will receive the diploma, degree, or certificate “with honors.”

Restrictions on Class Admissions
No person may attend classes unless the registration procedure has been completed and all tuition and fees have been paid or deferred payment is granted by the Business Office.

Attendance Policy
Students are expected to attend all regularly scheduled classes. However, it is recognized that occasional absences may be necessary. A student is responsible for work missed and is expected to be prepared for the next class. Academic departments establish their own class attendance policy. The attendance policy is explained by the instructor at the first class meeting.

Transcripts of Credit
Transcripts of credit must be requested in writing from the Student Services office. All financial obligations to the college must be cleared before any transcript will be released.

It is recommended that at least one week be allowed for the processing and mailing time of transcripts. Written requests for immediate copies of transcripts must be submitted twenty-four hours in advance. Any transcript given directly to a student will carry the notation “Issued to Student” and will require the presentation of a photo I.D.

Confidentiality of Student Records
CCC&TI adheres to the Family Educational Rights and Privacy Act of 1974, which outlines the rights and privacies afforded each student. Exceptions to this practice of privacy are the release of information defined by law as “directory information.” Unless a student gives written notice to the contrary, the following will be made public information:

- student’s name
- date of birth
- phone number
- home address
- e-mail address
- major field of study
- dates of attendance
- degree/diploma and awards received
- full- or part-time enrollment status
- participation in officially recognized activities
- most recent previous institution attended

A more detailed description of students’ rights concerning accessing records is available in Student Services.

Catalog Requirements
Candidates for the diploma, degree, or certificate must meet the requirements as out-
lined in the catalog for the year of their first enrollment under the semester system or for any subsequent bulletin under which work is taken but must complete work for their diploma, degree, or certificate within ten (10) years from the date of the catalog selected. Exceptions to this policy may be granted by petition to the appropriate department chair, the executive vice president and the director of admissions and records.

Grade Appeal Procedure
A student who believes his/her final grade in a course has been incorrectly assigned may seek corrective action through the following procedure:

Step 1: The student must first explain to the instructor why the student considers the grade to be incorrect. If the instructor is not available, the student should see the lead instructor, program coordinator, or the department chair. The first notification to the instructor of a questioned grade must take place within ten calendar days after grades are mailed or ten days after notification of the grade by school personnel. With programs having a lead instructor or coordinator, the student may request a meeting with the instructor and the instructor’s immediate supervisor.

Step 2: If the informal discussion with the instructor (and possibly the program coordinator) does not result in a satisfactory resolution, the student may file a formal written appeal. This appeal is made by completing the grade appeal form. This form must be submitted to the appropriate department chair within five days after Step 1 has been completed. Forms may be obtained from the faculty secretaries and/or Student Services. The department chair, in consultation with all involved parties, will render a decision as to the appropriateness of the grade in question and/or suggest equitable and educationally sound steps in reaching a fair solution.

Step 3: If the student is not satisfied with the results of Step 2, he/she may request that the written appeal be forwarded to the executive vice president. The student must request in writing that the appeal be considered by the executive vice president within five days after step 2 has been completed. The executive vice president, in consultation with all involved parties, will render a final decision regarding the grade and/or outline steps in reaching an appropriate resolution of the grade.

In the event that the above steps are inappropriate because the department chair and/or the executive vice president is the instructor involved, the president will serve as the decision-maker as outlined in Step 3. This grade appeal procedure is designed to provide due process in academic/grading matters only. Other grievances must be handled through the Institutional Grievance Procedure in this catalog.
Tuition and Fees

Policies Regarding Student Expenses
All tuition and required fees are due and payable at the time of the student’s registration. The vice president of finance and administration or a delegated representative shall have the authority to permit deferred payments of tuition and fees in situations where it is determined that a student is undergoing emergency financial conditions. All checks and money orders must be made payable to Caldwell Community College and Technical Institute. No student will be allowed to graduate, to receive transcripts, or to register for a new semester if said student has an unpaid balance due from any previous semester. Exceptions will be made only if such an outstanding balance has been guaranteed in writing by a financially responsible person or organization. The college will not accept checks from any individual who has written a check to the college from an account having insufficient funds.

Tuition
CCC&TI offers an educational opportunity at a minimum cost to the student. Tuition fees are set by the North Carolina General Assembly and are subject to change without notice. Current tuition amounts are as follows:

<table>
<thead>
<tr>
<th>In-state students</th>
<th>Out-of-state students</th>
</tr>
</thead>
<tbody>
<tr>
<td>16 credit hours or more</td>
<td>16 credit hours</td>
</tr>
<tr>
<td>$568.00</td>
<td>$3152.00</td>
</tr>
<tr>
<td>Part-time students per semester hour</td>
<td>Part-time students per semester hour</td>
</tr>
<tr>
<td>$35.50</td>
<td>$197.00</td>
</tr>
</tbody>
</table>

Tuition for High School Students
Students who are 16 years of age or older and are currently enrolled in high school are exempt from tuition and fees for courses that are classified as 100 level or above.

Tuition for Students Enrolled in More Than One Institution
If a student desires to enroll for the same semester at two or more institutions of the community college system, the total amount of tuition shall not exceed the maximum tuition. When enrolled at the second institution, the student must produce his/her validated registration receipt in order to waive any payment of tuition. Activity fees will be charged. It is the student’s responsibility to see that transcripts are sent to the “home” institution at the completion of the semester.

Tuition for Older Citizens
North Carolina residents sixty-five years of age or older shall be exempt from the payment of curriculum tuition and activity fees.
Tuition for Students Under the Age of 16
Any student enrolled under the age of 16 (with the exception of Huskins students) shall pay standard tuition and fees for the course.

Tuition for Inmates
Prison or correctional unit inmates will be exempt from the payment of tuition or activity fees.

Other Charges

Student Activity Fees
Curriculum students will be charged a $4.00 per course activity fee up to a maximum of $16 per semester (fall & spring), and $2 per course up to a maximum of $6 for summer semester. This fee is not refundable unless there is an institutional error.

Accident Insurance
A low-cost student accident insurance program is available for purchase in the college business office. Interested individuals should contact the business office at each campus for additional information. All students in health sciences programs must purchase this accident insurance each year. The cost of the policy varies each year.

Malpractice Insurance
Special malpractice insurance is required for biomedical equipment, cardiovascular sonography, CT/MRI, medical sonography, nuclear medicine, nursing, ophthalmic medical assistant, physical therapist assistant, radiography, and speech language pathology assistant students. This fee is not refundable.

Books and Supplies
Students are required to buy the necessary textbooks and supplies prescribed in the curriculum areas which they are entering. Textbooks and supplies vary according to different courses taken by the students. An average expenditure of $450 can be expected for fall semester. Standard school supplies are sold during the regular bookstore hours.

Graduation Fees
A graduation fee of $25 (subject to change) for a diploma/degree/certificate is payable at the beginning of the semester in which the student completes his/her program. This fee is not refundable. The current charge for each additional diploma/degree/certificate is $15.

Curriculum Refund Policy
Students will receive a tuition refund in accordance with the NC Administrative Code (NCAC 2D.0202). A full tuition and activity fee refund will be granted to students who pre-register and completely withdraw prior to the first day of the college’s academic semester. For students who pre-register and withdraw from a class, a full refund will be given for that class if the student officially withdraws prior to the first day of the semester and if the withdrawal reduces the credit hours taken by the student to fewer than 16 credit hours. Note: For purpose of the refund policy, “pre-registration” refers to registration that occurs prior to the first day of the semester. A 75 percent
refund will be given to students who completely withdraw from the first day of the semester until the official 10 percent point of the semester. A 75 percent refund will be given to students who withdraw from class(es) from the first day of the semester until the official 10 percent point of the class(es). For contact hours classes, 10 calendar days from the first day of classes will be the determination date. No activity fees will be refunded for students receiving 75 percent refunds. Full refunds (tuition and activity fees) will be given automatically if the class(es) never materialized. Fees not refundable (unless institutional error) are (1) insurance payment, (2) special course fees and (3) graduation fee. In order to begin the refund process, a student must:

**Caldwell Campus**
- Complete the student portion of the Registration Change Form (referred to as Drop/Add Form), including student and advisor signatures. This form is available in Student Services and in the Faculty office. In certain cases, e.g., institutional error, withdrawals before the first class, the vice president of Student Services or his designee(s) may sign the official drop form.
- Present the former to a staff member in Student Services in order for the official drop date to be recorded.

**Watauga Campus**
- Complete the student portion of the Registration Change Form (referred to as Drop/Add Form), including student and advisor signatures. This form is available from the Watauga Instructional Facility, Watauga Student Support Center or Watauga High School. In certain cases, e.g., institutional error or withdrawals before the first class, the Student Services staff or the Executive Director of the Watauga Campus may sign the official drop form.
- Present the form to a staff member in Student Services in order for the official drop date to be recorded.

Refunds will not be given if:
- The Registration Change Form is incorrectly or incompletely filled out.
- The date the Registration Change Form is officially received in the Student Services Office of either campus is past the appropriate 10 percent point.
- The drop is done by the instructor rather than the student.

**Accounts**
Until all accounts are satisfactory, no transcripts, certificates, diplomas, or degrees will be issued nor will students be permitted to complete registration.

**Residence Status for Tuition Payment**
To qualify for in-state tuition, a legal resident must have maintained a domicile (legal residence) in North Carolina for at least the twelve months preceding the date of first enrollment or re-enrollment in an institution of higher education in this state. Student status in an institution of higher education in this state shall not constitute eligibility for residence to qualify said student for in-state tuition.

The burden of establishing facts which justify classification of a student as a resident entitled to in-state tuition rates is on the applicant. Regulations concerning the classification of students by residence for purposes of applicable tuition differentials are set forth in detail in A
Manual To Assist the Public Higher Education Institutions of North Carolina in the Matter of Student Residence Classification for Tuition Purposes. Each enrolled student is responsible for knowing the contents of that manual, which is the controlling administrative statement policy on this subject.

Copies of the manual are available on request at the college library or from Student Services on both campuses. Students seeking a change in resideniary status may be asked to complete the Resideniary Information Form. With information gained from this form, the vice president of student services and the director of enrollment management services will make the initial resideniary determination on the Caldwell campus.

The coordinator of admissions and records services will make the determination of residen- cy status on the Watauga Campus. The final campus appeal to the initial classification will be heard by the admissions committee. If not satisfied with the disposition of the complaint, an appeal may be made to the State Residence Committee. Information on the appeal process may be acquired from Student Services.

Veterans Programs
To qualify for assistance from Veterans Administration, a student must have contributed money to the Educational Tuition Assistance Fund or be a dependent or spouse of a veteran. If students have a question as to whether or not they qualify, they should contact the Atlanta Regional Office at (888)442-4551. After confirmation of eligibility, students should contact the Veterans Coordinator to complete paperwork to be submitted to the Veterans Administration in Atlanta.

To receive certification for Educational Tuition Assistance, students must submit the following information to the Veterans Coordinator:

- Copy of the student’s Certificate of Release or Discharge from Active Duty (DD-214).
- Completed Application for VA Education Benefits
- Completion of all admission requirements for the program of study, including Application for Admissions, Placement Testing and all transcripts from both high school and college(s).
- Copy of Registration Form.

At registration, it is the responsibility of the veteran to make payment directly to the school for all charges that are incurred. This includes tuition and books. Anyone who receives assistance from Veterans Administration should become familiarized with VA regulations concerning satisfactory conduct and academic progress requirements. Veterans can ensure proper payment by taking only courses listed on the curriculum check sheet for their program of study and by following the above guidelines to receive certification.

Those serving as a Selected Reserve may qualify for Education Assistance. Please contact the Veterans Coordinator for additional details.
Financial Aid for Students

General Information
Caldwell Community College and Technical Institute encourages prospective students who desire to enroll but face financial problems to apply for assistance through the financial aid office. Financial assistance for educational costs may be available in the form of scholarships, grants, loans, and work programs. Within the limited funds available for these purposes, every effort is made by the institution to help students who need monetary assistance. Financial need is determined through analysis of an application prepared by the student and parents or guardian. Analysis of the family’s financial situation indicates the family’s ability to contribute toward educational expenses. Most financial aid is based on need rather than on scholastic record. Financial need is the difference between the total education expenses and what the family can afford to contribute. There are three types of student financial aid: gift assistance, student loans, and work. Gift assistance includes grants and scholarships: awards that do not have to be repaid. Loans and work are self-help. Loans are usually paid back after enrollment is terminated. Work enables students to pay part of their expenses through their own earnings.

Application Procedure
Students who are entering CCC&TI for the first time and are in need of financial aid are requested to follow this application procedure:

1. After application for admission has been initiated (see “Admissions”), the student should file an application for aid. (see #2). It is to the student’s advantage to apply for aid at least three months before the expected enrollment date.
2. Complete a Free Application for Federal Student Aid (FAFSA). It will be the only form necessary to apply for all aid programs at CCC&TI including federal and state grants. FAFSA forms are available in Student Services, at the Caldwell and Watauga Campuses or from high school counselors or online at www.fafsa.ed.gov.
3. After determination of scholarship and grant award, an award notification will be sent to the recipient. If an award notification has not been received within 3 weeks of the date the student received his or her Student Aid Report (SAR), the student should contact the Financial Aid Office.

Eligibility
Applicants may apply for a scholarship, grant, loan, work-study, or any combination of these. The total combined sum of these must not exceed total need.

To receive financial aid from these programs, a student must
1. Be a U. S. citizen or an eligible non-citizen.
2. Be registered with Selective Service, if required.
3. Have financial need.
4. Be older than compulsory age of secondary school attendance.
5. Not already have a baccalaureate degree.
6. Maintain satisfactory academic progress as defined for aid recipients.
7. Not owe a refund on a previous grant nor be in default on a previous educational loan.
8. Be enrolled in a program leading to a degree or diploma.
9. Have a high school diploma or equivalent.

**Aid Recipient Responsibilities**

In the event that a student receiving aid withdraws from the institution, the student will be responsible for return of Title IV funds on a prorated basis. Students are given 45 days to repay or make arrangements to repay the overpayment. Should this not occur, the debt will be turned over to the Department of Education, and the student will not be eligible for any Title IV funds anywhere until arrangement have been made to repay the debt.

Students can receive aid from only one institution per semester. If a student is planning to register at more than one college in the same semester, he or she needs to seek advisement from the Financial Aid Office prior to registration.

The student has the obligation to maintain the “Satisfactory Academic Progress Requirements” as defined by this institution specifically for financial aid recipients. Failure to maintain academic progress will result in the loss of eligibility for financial aid. Eligibility may be regained by re-establishing progress. Students may obtain a copy of the “Satisfactory Academic Progress Requirements” from the Financial Aid Office.

**Federally Sponsored Programs**

When a student submits the Free Application for Federal Student Aid (FAFSA), his or her eligibility for the following programs will automatically be checked. Applications may be obtained from high school counselor offices, on the Internet site at www.fafsa.ed.gov or from the office of Financial Aid at this institution. All of these programs are a part of Title IV funding.

**Federal Pell Grant**

The Federal Pell Grant program is designed to provide financial assistance to those who need it to attend post-high school educational institutions. The amount of the Pell Grant is determined on the basis of the student’s and his/her family’s financial resources.

The Pell Grant Award is a grant and, unlike a loan, does not have to be repaid. Every student who is applying for financial aid at CCC&TI must apply for the Pell Grant.

**Federal Supplemental Educational Opportunity Grant (FSEOG)**

This program of direct grants of financial aid is for students of exceptional financial need who, without the grant, would be unable to continue their education.
Federal Stafford Loan
This program enables the student to borrow directly from a bank, credit union, sav-
ings and loan association, or other participating lender who is willing to make the educational loan. The loan is guaranteed by a state or private nonprofit agency or insured by the federal government. To apply for the federal interest benefits, a student must submit to the lender a recommendation from his/her school as to the amount he/she needs to meet educational expenses. No interest is charged while the student is in school or six months after he/she leaves school. Payments begin six months after the student graduates or leaves school. Up to ten years may be allowed to complete repayment. Interest rates are variable from 6 to 8.25 percent. A person does not have to make payments for up to three years while serving in the Armed Forces, Peace Corps, or VISTA, or for any time the person returns to full-time study. North Carolina residents should apply through College Foundation, Inc., PO Box 12100, Raleigh, NC 27605. Applications are available in the financial aid office.

Federal Work-Study Program
Caldwell Community College and Technical Institute participates in the federal work-study program which provides on and off campus work opportunities for students needing financial assistance to attend school. Work is available for students to assist in the America Reads program which permits students to tutor in local elementary schools. Other employment opportunities are available in the library, faculty and administrative offices, laboratories, shops and as on-campus tutors.

Students working under this program are paid monthly for the work performed. In arranging a job and determining how many hours a week a student may work under this program, the financial aid office will take into account the student’s
- need for financial assistance
- class schedule
- health
- academic progress

State-Supported Grant, Loan & Scholarship Programs

Listed below are some of the state-supported grant and loan programs available at Caldwell Community College and Technical Institute. Because grant and loan programs may change for year to year, please check with the Financial Aid office for current information. Also, the North Carolina State Education Assistance Authority publishes a handbook, “Student Financial Aid for North Carolinians.” that provides up-to-date state-supported grant and loan program information. This can be located at http://www.cfnc.org under “Publications.”

Grants
North Carolina Community College Grant
To be eligible for the North Carolina Community College Grant (NCCCG) students must 1) be a resident of North Carolina, 2) enroll for at least 6 credit hours per semester in a curriculum program, and 3) complete the Free Application for Federal Student Aid (FAFSA). Eligibility is determined based on the same criteria as the
Federal Pell Grant; students not eligible for the Federal Pell Grant may be considered for the grant based on their estimated family contribution (EFC) as determined on the Student Aid Report (SAR). The Financial Aid Office will do notifications of any NCCCG awards.

North Carolina Student Incentive Grant
Legal residents of North Carolina who are enrolled full time and maintaining academic progress may apply for the NCSIG. Students must demonstrate "substantial financial need." The NCSIG program is administered in North Carolina by the College Foundation, Inc. Applicant must 1) be a US citizen, 2) be a North Carolina resident, 3) be enrolled or accepted for enrollment on a full-time basis at a North Carolina postsecondary institution, 4) not be enrolled in a program designed primarily for career preparation in a religious vocation, and 5) maintain satisfactory academic progress. Award is available to undergraduates who demonstrate “substantial financial need.”

The application procedures are 1) complete and file the Free Application for Federal Student Aid (FAFSA), 2) show on the form that North Carolina is his/her state of legal residence, and 4) list at least one North Carolina college, university, technical or vocational school in the release section of the form. The deadline for applying is March 15 of each year.

Loans
North Carolina Student Loan Program for Health, Science, and Mathematics
The NC State Education Assistance Authority (NCSEAA) administers this program. The loan obligation may be forgiven through approved employment within the state of North Carolina provided the recipient works in the field for which he/she was funded. Associate Degree/Certificate Programs can receive $3,000 per year. Maximum loan amount is $6,000 for two years if unconditionally accepted into specific program discipline. One calendar year of full-time employment in designated shortage areas is required for each school year a loan was received. Approved service areas include state facilities and educational systems, or designated healthcare and veterinary science disciplines. Should the student not complete the service obligation, cash repayment will be required. The in-school interest rate is 4%. The out-of-school interest rate ranges from 10% to 15%, depending upon the circumstances of repayment.

Who is eligible? To be considered for a loan, you must: 1) be a citizen of the US and a legal residents of North Carolina, 2) have attained unconditional accepted or promoted in their respective fields, and 3) must establish financial need. Eligible fields of study are Occupational Therapy/Assistant, Physical Therapy/Assistant, Radiography, Nuclear Medicine Technologist, and Nursing.

All applications and supporting materials must be submitted to the NCSEAA no later than June 1st for the upcoming academic year. See the Financial Aid Office for application packets.

Nurse Education Scholarship-Loan Program (NESLP)
The N. C. General Assembly created this program in the 1989 session in an attempt to alleviate the nursing shortage in North Carolina. The North Carolina State Education Assistance Authority administers NESLP. NESLP awards range from $400 to $3,000, depending upon the student’s demonstrated financial need, cost of instruction, other financial assistance, and the amount of funding available through NESLP. Recipients must be enrolled in the Associate Degree Nursing program, be a NC resident, and demonstrate financial need. Recipient enters into a contract with the State of North Carolina to work full-time as a Registered Nurse in North Carolina. A minimum of six months consecutive full-time employment with one employer is required to qualify for service cancellations. Loans not repaid through service must be repaid in cash. The interest rate for cash repayment is 10% from the date of disbursement. Student has up to seven years to repay loan in service or ten years to repay loan in cash. NESLP awards are administered through the Financial Aid Office. Awards will be given to first year nursing students that are in their second semester nursing class, show a financial need, and are performing at a satisfactory academic standard.

Scholarships

North Carolina Veterans Scholarship
Award is available to children of certain deceased or disabled veterans or of veterans who were listed as POW/MIA. Veteran must have been a legal resident of North Carolina at time of entry into service, or child must have been born in North Carolina and resided there continuously.

Full scholarships provide for four academic years of free tuition, room, and board allowances and mandatory fees at state-supported institutions. Limited scholarships provide free tuition and mandatory fees. The yearly value at private institutions is $4,500 (full) and $1,500 (limited). Awards may be used for either undergraduate or graduate study.

For information concerning this scholarship program, contact the North Carolina Division of Veterans Affairs, 325 N. Salisbury Street, Raleigh, NC 27603, (919) 733-3851. The Division of Veterans Affairs notifies applicants of approval of benefits.

Nurse Scholars Program (NSP)
Created by the 1989 General Assembly, this program was designed to address the shortage of trained nurses practicing in North Carolina. The North Carolina State Education Assistance Authority administers NSP. The NSP is a competitive, merit-based scholarship/loan program available to students who have chosen to enter the nursing profession. An 11-member Nurse Scholars Commission selects recipients for the award on the basis of superior academics, leadership potential, and desire to practice nursing on a full-time basis in North Carolina. Applications may be received from the Financial Aid Office at the college, counselor offices in the high schools in North Carolina and from the North Carolina State Education Assistance Authority.

Wachovia Technical Scholarship
This fund was established through a gift from the Wachovia Bank and Trust Company to the Department of Community Colleges. The first scholarship was awarded at CCC
and TI in 1985. To qualify as a candidate for this scholarship, a person must be a full-time student enrolled in the second year of a two-year technical program, must demonstrate financial need and scholastic promise, and must use the scholarship to pay for books, tuition, and transportation. Scholarships valued at $500 ($250 per semester) each are awarded annually. There is no special application form for the scholarship. Each institution selects its own recipients from applicants meeting the above criteria. The Financial Aid Office will administer awards and recipients will be notified.

NOTE: Additional scholarships may be available on a year-to-year basis. Please check the web site http://www.cfnc.org under “Publications” in the “Student Financial Aid for North Carolinians” provided by the North Carolina State Education Assistance Authority.

Locally Supported Scholarship and Grant Programs

CCC&TI has numerous types of scholarships 1) by application, 2) by nomination, and 3) needs-based. The sources of these scholarships (clubs, individuals, industries, businesses, foundations, etc.) determine what criteria are to be used in awarding them. Awards are determined by 1) nominations made by in-house faculty/staff with selections done by the Scholarship Committee appointed by the president of the college, 2) awarded by the Financial Aid Office based on the information obtained from the FAFSA form, 3) awarded by an external agency.

Due to limited funds, students are urged to complete the FAFSA form by March 15 of each year to be considered for these needs-based scholarships. Students are urged to check the “Scholarship Bulletin Board” located outside the Financial Aid Office for additional scholarship information.

Scholarships Available by Application

Alpha Delta Kappa Memorial Scholarship
The Alpha Delta Kappa Sorority established this academic scholarship. The recipients are to be pre-teaching students who have completed at least 33 credit hours while maintaining an overall average of at least 3.0. Scholarship, leadership, and maturity will be considered. The award is made in the spring semester. Check with the Financial Aid Office for application information.

Altrusa Club Scholarship
This fund was established by the Altrusa Club of Caldwell County in 1975 to aid students over 25 years of age who are residents of Caldwell County and who are returning to school to pursue career training. Check with the Financial Aid Office for application information.

Bill and Vivian Armfield Scholarship
This fund was established by David and Amy Clark to honor the Armfield's contribu-
tions to CCC&TI. The recipient must be a Caldwell County resident interested in pursing a career in elementary education through the college transfer program. The recipient must have a 2.5 GPA upon high school graduation and maintain a 2.5 while enrolled in college.

Kenny Beane Scholarship
Established in 1998 by friends and family of Kenny Beane. The purpose of this scholarship is to assist students enrolled in a vocational certificate or diploma program. Recipient’s must demonstrate financial need, be a high school graduate or a second semester college student with a grade point average of 2.5 or better. Applications are available in the Industrial/ Transportation Office or the Financial Aid Office.

Donna and Robert Belk Scholarship
Established in 2003 in memory of Donna Belk’s mother, Mrs. Charles Below and her aunts, Hilda Smith and Mildred Bell. To honor their years in education, the scholarship will be presented to a second year or transfer student with financial need who is enrolled in a Pre-Teaching or Health Sciences program.

G. Lewis Bernhardt Scholarship
Established in 2003 from the estate of Mr. G. Lewis “Bub” Bernhardt. This scholarship provides financial assistance to Educational Talent Search students to enhance the ability of the student to continue his/her education. See TRIO counselor for more information.

Foundation Scholars Award and Presidential Scholars Award
Established in 2001 by the CCC&TI Foundation. These scholarships are to promote and to recognize outstanding academic achievement among students at Caldwell and Watauga high schools. Criteria for selection includes academic achievement with a minimum GPA of 3.00. Applications are available from any of the four high schools through the guidance counselors office or from the CCC&TI Financial Aid Office.

Hammary Furniture Company Sam Reid Scholarship
Established by Hammary to honor Sam Reid, a fifty-year employee, this scholarship is available to current Hammary employees, their spouses, and direct descendants, as well as to Mr. Reid’s grandchildren. Applications are available in the Financial Aid Office or from the Personnel Office at Hammary Furniture Company.

Industrial/Transportation Scholarship
Established May 24, 1994 endowed April 2000. Scholarships will be awarded to full-time and/or part-time students on the basis of achievement or financial need. A student must be beginning or continuing study in a technical field that is assigned to the Industrial/Transportation Department and must be pursuing a Certificate, Diploma, or AAS Degree. The Industrial/Transportation Scholarship Committee in accordance with the by-laws will award this scholarship as they exist on the date the scholarship is awarded. The award is not perpetual and must be designated to a specific semester. Applications are available in the Industrial/ Transportation Office or the Financial Aid Office.
J. Wade and Mary Sue Kincaid Memorial Scholarship
Established December 2000 by Steve and Kim Kincaid in memory of J. Wade Kincaid. Scholarships will be awarded to students enrolled at CCC&TI (curriculum or non-curriculum) who are current Kincaid Furniture Company employees with over one year of service, spouses of eligible employees, retirees, or direct descendants of eligible employees or retirees. Non-curriculum courses must lead to specific employment opportunities. If funds are not sufficient to meet the tuition, fees, and books of all that apply employees will be selected first, and then selection will be based on need. If no one applies that meets the criteria outlined above, the scholarship will be awarded to any student enrolled in a furniture technology course based on need as determined by the Dean of Corporate and Continuing Education. Applications are available in the Financial Aid Office, Continuing Education, and at Kincaid Furniture Company in the Human Resources Office.

McAfee Scholars Award
Established during the 1986-87 school year as a memorial to the late Charles McAfee, longtime college business instructor, this award will be given to a graduating senior from a local high school for use in a business-oriented program of study at CCC&TI. Criteria include character, academic record, outstanding achievement in the world of work, and extracurricular or community involvement.

W. Michael Pearson Scholars Award
Established in May 2000 by Marjorie H. Pearson in memory of W. Michael Pearson. This is designated for a yearly $1,000 merit scholarship for each of the three high schools in Caldwell County to attend CCC&TI. Scholarships may be used for tuition, fees, books, childcare, transportation and other needs. Applications are available from any of the three high schools in Caldwell County through the guidance counselors office or from the CCC&TI Financial Aid Office.

Jesse W. Powell Memorial Scholarship
The Lenoir Firefighters Association, in memory of Jesse Wayne Powell, one of their own, established this memorial scholarship in 1994. This scholarship is available to full-time students planning to attend Caldwell Community College and Technical Institute. This scholarship will be given annually and may be renewed for the recipient for up to three consecutive years, providing the recipient maintains full-time status and a grade point average of 2.0. The Jesse W. Powell Memorial Scholarship will pay for books and tuition for the school year, not to exceed $500. Applicants should be members of or a dependent of a member of a rated fire department in Caldwell County. Also eligible are grandchildren of members or retired members of a rated fire department in Caldwell County. Contact the Lenoir Firefighters Association for application information. The Jesse W. Powell Memorial Scholarship Committee will announce the recipient by July 1 each year.

Thad and Reva Tunmire Truck Driving Scholarship
Established January 2000 in honor of Thad and Reva Tunmire. Awarded to students enrolled in the Truck Driving Program at CCC&TI. Maximum amount per student $200. Applications are available in the Industrial/ Transportation Office or the Financial Aid Office.
Vocational Incentive Scholarship
Established April 2000 by the Board of Directors of the Foundation of CCC&TI. Scholarships will be awarded to full-time and/or part-time students. A student must be beginning study in a technical field that is assigned to the Industrial/Transportation Department and must be pursuing a Certificate, Diploma, or AAS Degree. The Industrial/Transportation Scholarship Committee in accordance with the by-laws will award this scholarship as they exist on the date the scholarship is awarded. The award is not perpetual and must be designated to a specific semester. Applications are available in the Industrial/Transportation Office or the Financial Aid Office.

Watauga Nursing Scholarship
Created through a fund-raising drive in 1990, this fund is to be used for a Watauga County resident who is accepted in the nursing program. Applications are available in the Financial Aid Office.

James Douglas Weiller Scholarship
Established December 2000 by Barbara and Don Weiller and Mia Weiller in memory of James Douglas Weiller. This is designated for a yearly scholarship based on need as determined by the scholarship committee for non-traditional students (25 years old and older) enrolled in the Truck Driver Training Certificate Program at CCC&TI. If there are no applications from a non-traditional student, the scholarship committee is authorized to award the scholarship to any needy student in the Truck Driver Training Program. Applications are available in the Industrial/Transportation Office or the Financial Aid Office.

Scholarships Awarded by Faculty/Staff Nominations

Julia Alexander Memorial Scholarship
Established in 1981, this award is designated for a student in an office-related technology program who maintains a GPA of 2.5. This fund honors a past president of the college’s NCAEOP chapter.

The Arts and Sciences Faculty Scholarship
The scholarship is awarded annually to a college transfer student to honor retired arts and sciences faculty. If awarded to a math student, it will honor Lloyd Coffey; if a history student, it will honor Ray Huckabee.

Wilson and Ola Brown Scholarship
Given in 1997 by Gilma Roberts in honor of her parents, the recipient must be a full-time student enrolled in the college transfer program, a first-generation college student born in Watauga County and have a 3.0 GPA on a minimum of 12 semester hours.

Business Club Scholarship
The Business Club of CCC&TI established this fund in 1989. An annual award is presented to a student enrolled in a business curriculum.
Marian Alma Coffey Memorial Scholarship
The family and friends of the late "Mac" Coffey, who was a student at CCC&TI in recreation leadership, established this memorial scholarship to be used for second-year students enrolled in allied health or human services programs. Nominations and selections will be made by the Allied Health Department.

Stephanie Dale Memorial Scholarship
In 1985, the teaching staff of CCC&TI and various healthcare institutions affiliated with CCC&TI's radiography program, established this fund as memorial to Ms. Dale, who had been a student in the radiography program. The award will be made each year to a second-year radiography student. Criteria will include character and leadership, academic performance, and need.

Frazier Literature Scholarship
This scholarship was given in memory of Mr. and Mrs. John Alexander Frazier. It is awarded to academically successful students who are pursuing English degrees. A committee from the arts and sciences department selects recipients.

Rufus C. Gwyn Memorial Scholarship Fund
To honor Rufus C. Gwyn, a former instructor of data processing, the faculty awards a scholarship each year to a student who is graduating from CCC&TI and whose intentions are to further his/her education. The scholarship is paid to the institution where the student is enrolled. Faculty, staff, community, and students may make nominations. Those making nominations and the committee selecting the recipient of the scholarship will consider:
1. Integrity, wisdom, concern for others, and humility;
2. Desire to continue education;
3. Need;
4. Capability to succeed in the area in which the student is to enroll.

Helen J. Hatley Achievement Award
The board of trustees of CCC&TI established this fund in 1984 to honor Helen Hatley, Controller Emeritus. The award is presented at graduation each year to a student who has completed one half of the required hours in a specific technical or college transfer curriculum with a cumulative GPA of 3.50 or better. Other criteria include integrity, humility, concern, wisdom, dependability, and desire to continue one's education at CCC&TI, and potential for employment or continuing education after graduation.

Jimmy Hemphill Scholarship
This scholarship was established in August 1998 by friends, family and colleagues to honor Jimmy Hemphill, former executive vice-president, upon his retirement from CCC & TI. The award provides a merit scholarship to a student who has demonstrated academic achievement, a positive approach to life, a personal drive to succeed, and service to the college or community.

Beverly Holt Scholarship
Awarded to Cardiovascular Sonography students with financial need.
Claudia S. Kincaid Achievement Award
The friends and co-workers of the late Claudia Kincaid, Dean Emeritus, Student Development of CCC&TI, established this fund in 1983. The award is presented at graduation each year to a student who has completed one half of the required hours in a specific curriculum with a cumulative GPA of 3.50 or better. Other criteria include extracurricular involvement, concurrent employment while enrolled, and potential for success after graduation.

Elizabeth M. Miller Scholarship
Established November 2001 by Dr. and Mrs. Kenneth K. Humphreys in memory of Mrs. Humphreys’ mother, Elizabeth M. Miller. This scholarship is available by faculty nomination for a deserving second year, full-time, female student who has at least a “B” average for the first year of college.

Samuel William Orlando Scholarship
Established in 2003 as a memorial to Sam Orlando, an instructor at the Watauga campus of CCC&TI, by his friends and family. The recipient must attend the Watauga Campus of CCC&TI and must have taken, or plan to take, at least two religion courses; however, no specific major is required.

Eunice Query Scholarship
Established in July of 1995. An endowed perpetual scholarship to honor Ms. Eunice Query, this scholarship will be awarded to a student nominated by faculty or staff with selection to be made by a faculty committee. Criteria include a grade point average of 3.0 after the completion of two academic semesters; a desire to continue one’s education; worthiness evidenced by character, integrity, concern for others, dependability, potential for success; involvement in extra-curricular activities, community involvement, and/or work experience.

Query-Hickman Scholarship
Established in 1993 to honor William Hunter Query and Lucille Query Hickman, this scholarship will be awarded to a student nominated by faculty or staff with selection to be made by a faculty committee. Criteria include a grade point average of 3.0 after the completion of two academic semesters; a desire to continue one’s education; worthiness evidenced by character, integrity, concern for others, dependability, potential for success; involvement in extra-curricular activities, community involvement, and/or work experience.

Dan and Ila Stallings Scholarship
This fund was established by Dr. Stallings’ wife and children to honor his years of service to CCC&TI and his many contributions to education. An annual scholarship is awarded to a second year student with financial need, who is enrolled in the Fine Arts program, and maintains a B average.

Dent and Louise Sullivan Scholarship
Established in 2003 to provide a scholarship to a deserving 2nd year full-time student working toward an accounting degree with plans to transfer to a four-year institution.
Scholarships Awarded By Financial Need

Blackwelder Foundation Memorial Scholarship
The Blackwelder Foundation established this scholarship in 1986 as a memorial to Dr. Blackwelder. The recipient is to be a needy Caldwell County resident who is pursuing a degree in nursing or another medical field.

Caldwell County Medical Society Student Aid Fund
In 1984, the Caldwell County Medical Society established a fund that provides scholarships in the health-related programs.

Coffey Foundation Scholarship
The Coffey Foundation established this scholarship fund in 1978 as a memorial to Mr. Harold Coffey. Its recipients are to be needy residents of Caldwell and contiguous counties. Preference is given to students in nursing and other medical programs.

Vester Corpening Scholarship
Established in 1980 by the Ebony Kinship Club, this memorial fund will aid needy students from Caldwell County.

M. L. DeVane Scholarship
The Ebony Kinship Club of CCC&TI established this fund in 1975 to aid a student enrolled full-time at this institution. It was further stipulated that the recipient must have completed 30 credit hours while maintaining an overall average of 2.5 or higher.

Ben W. and Dixie Glenn Farthing Memorial Scholarship
Established by their family, this fund honors the memory and tradition of Mr. and Mrs. Farthing, who were from Valle Crucis in Watauga County. Recipients must be enrolled in nursing and must be residents of Watauga, Avery, or Mitchell counties who do not use tobacco products.

First Generation Scholarship
Established in 1984 by the board of trustees of CCC&TI, this fund provides assistance to students who represent the first generation of their families to attend college.

Addie B. Flowers Scholarship
Established in 1978 as a memorial to Ms. Flowers, this fund is designated to aid students in Caldwell County in need of financial assistance.

Centura/Granite Savings & Loan Bank Association Scholarship
The board of directors of the association voted in 1974 to establish this scholarship fund. An award is to be made to a graduate of South Caldwell High School. The student selected must be enrolled or accepted for enrollment in either a vocational or a technical program.

T. C. and Annie High Scholarship
Established by the family of T. C. and Annie High to provide financial assistance for a
student from the southern part of Caldwell County.

**Don Jensen Habilitation Scholarship**
Established in 2002 by Tom Brittain to honor Don Jensen for his dedication to improving the lives of disabled citizens. This scholarship provides assistance to deserving students enrolled in any habilitation program with preference given to students enrolled in a coop program or working in a habilitation facility.

**The Knights of Phythias, Caldwell Lodge 78, Scholarship**
Established in 1992 by the Knights of Phythias with a gift of $50,000, the scholarship will be used to assist needy students from Caldwell County. Awards will be based on the specific financial needs of students and the varying cost of enrollment in different programs.

**Emory C. McCall Scholarship**
Friends of the late Emory C. McCall established this memorial scholarship as a perpetual fund in 1976. It had initial contributions of over $10,000 from more than 85 individuals and businesses.

**The McConnell Family Scholarship**
Given by Alice Howland McConnell and Elizabeth McConnell Jarrett in 1991 in memory of their parents, Loy Dixon and Adda Howland McConnell, this scholarship is designated for needy students preferably, but not exclusively, in health career programs.

**Wilfred Randolph McGowan Scholarship**
Established in 1978 as a memorial to Randy McGowan by his friends and family, this fund is to be used for residents of Caldwell and contiguous counties. It is based on need and academic promise.

**Gladys and Glenn Miller Memorial Scholarship**
Established in 1997 as a memorial to Gladys and Glenn Miller by their daughter, Dr., Susan Maynard, this fund is to be used for needy students.

**Myron L. Moore, Jr. Scholarship**
The Lenoir Mirror Company established this fund in 1983 to assist needy students.

**Orville B. and Grace C. Peterson Memorial Scholarship**
This scholarship was established in 2003 through a gift from the estate of O. B. and Grace Peterson. The fund provides needs-based scholarships to persons needing financial assistance to continue their education.

**Carl B. and Olene B. Prestwood Scholarship**
The family and friends of the late Carl Prestwood established this memorial fund in 1976 to be used for scholarships for deserving students.

**Dr. C. L. Robbins Educational Scholarship**
Established through the estate of Dr. C.L. Robbins, this scholarship is restricted to Caldwell County residents with financial need.
Thomas M. Robbins Nursing Scholarship
Established in 1998, this is an endowed scholarship for needy nursing students enrolled in CCC&TI.

Mrs. D.L. Snyder Scholarship
Established in 1997 by the family of Mrs. Snyder on the occasion of her 95th birthday to provide scholarships for needy students enrolled in allied health programs. Recipients must be enrolled in an allied health program and have a 3.0 GPA on a minimum of 12 semester hours.

Dr. Baxter S. Troutman Scholarship
Family and friends of Dr. Baxter S. Troutman established this scholarship in 1987 on his retirement after fifty years of practicing medicine in the community. Recipients must be enrolled in nursing. Contributions to this fund are accepted at any time.

June Wendelborg Scholarship
This scholarship was established in 2002 through a gift from Ms. June Wendelborg. The fund provides needs-based scholarships to persons needing financial assistance to continue their education.

Wilson Family Scholarship
Established in 1997 to honor Hugh and Martha Wilson by their children, this fund is to provide scholarships and other aid to needy students from Caldwell County.

Other Sources of Financial Assistance

Bank of Granite Literacy Fund
Funds are given by the Bank of Granite to assist literacy students who have special needs.

Barton and Estoy Hayes Scholarship
An incentive scholarship for Career Center students to continue their education at the college level. To graduating students completing a Career Center program, the foundation will honor certificates issued by the Career Center which can be exchanged for tuition, fees, and textbooks up to $100 each for the first college level vocational or technical curriculum course in which they enroll at CCC&TI.

Dr. H.E. Beam Scholarship
Established October 2000 in honor of Dr. H. Edwin Beam by friends, family and colleagues. The scholarship is for tuition, fees and/or instructional supplies for non-curriculum students in programs of study exceeding 90 contact hours leading to specific employment opportunities. Based on self-declared need, referred by instructors in the applicable programs and approved by the Dean of the Corporate and Continuing Education Department or her/his designee. (Contact hours subject to change as recommended by administrators.)

J.E. Broyhill Fund (Gateway Scholarship)
This scholarship is for tuition, fees and books for students enrolled at CCC&TI who
have completed at least one semester at Gateway High School and graduated from high school. A letter from the Principal of Gateway High School certifying completion of one semester must accompany student at registration.

**CCC&TI Foundation Child Care Fund**
Provides funds to assist needy students with child care expenses. Applicants should see the ChildCare/Career Counselor in Student Services for additional information.

**CCC&TI Foundation Incentive Scholarship**
This scholarship pays for tuition, fees, and books for students who receive an adult high school diploma or general educational development certificate (GED) from CCC&TI. Award certificates will be sent to students shortly after they complete one of the two programs.

**John A. Forlines, Jr. Educational Scholarship**
Established in 2003 by friends and family of John A. Forlines, Jr. in honor of his many contributions and years of service to the college. Forlines was a founding trustee and served as the first chairman of the Board of Trustees. He served in that capacity for 19 years and currently serves on the Foundation Board of Directors. His support and strong belief in education will provide financial assistance to many needy students.

**Kathleen McGalliard Medical Scholarship**
The hospital auxiliary established this scholarship to aid deserving students enrolled in the nursing program. Preference will be given to employees of Caldwell Memorial Hospital. Selection is performed by the Auxiliary. One of the two scholarships has been named the Dr. Jane T. Carswell Scholarship to honor Dr. Carswell.

**Lorraine Mummert Scholarship**
The purpose of this fund is to honor Lorraine Mummert and to encourage the parents and family members of identified Caldwell County high school graduates to continue their education at CCC&TI. Specifically the scholarship will 1) provide tuition payments for a one-time curriculum or continuing education class or 2) pay for transportation/child care expenses for a literacy class for the parents and eligible siblings of Caldwell County high school graduates who attended at least one semester at Gateway School, Extended Day, or any other alternate school designated to address the needs of high risk students. Special provisions are 1) students must have graduated after April 1999, 2) the scholarship is only valid at CCC&TI and will not exceed $200 per scholarship year, 3) selection of users will be identified by the graduate and shall not exceed two (2) users per family. (Definition of family is mother, father, step-mother, step-father, brother, sister, step-brother, step-sister or any “significant other” involved in the family), 4) users of this scholarship must not have graduated from any post-secondary institution, 5) funds will be dispersed as financial aid with the users receiving no direct cash. Caldwell County Public Schools will identify qualified graduates. Students must get their eligibility forms from Gateway School or from CCC&TI “Dream” Scholarship Coordinator.
David Pittman Emergency Assistance Fund
Established by friends and family of Dr. David Pittman, former CCC&TI faculty member and administrator, this fund is used to aid Watauga campus students facing emergency situations. Assistance is limited to $40 in any semester and may be returned to the fund. Any faculty member may initiate action by contacting the Watauga campus financial aid office.

Gilma Brown Roberts Emergency Assistance Fund
This fund was established in 1982 by the institution's staff and faculty to aid students facing critical emergency situations. Assistance may not exceed $40 in any semester and may be returned as a gift to the fund. Any faculty or staff member may initiate action for a student by contacting the Financial Aid Office or the dean of student services.

Nurse Aide I-II Scholarships
Based on need, these scholarships cover the cost of tuition, books and supplies for students enrolled in the Nurse Aide I or II program of study. Payment is authorized by the dean of Corporate and Continuing Education.

Dr. Robert L. Rogers Scholarship
Established in 2003 as a memorial to Dr. Robert L. Rogers by his friends and family. Dr. Rogers served as a trustee of CCC&TI, and his late wife, Joan, served on the Foundation Board of Directors. The fund provides assistance to persons needing financial assistance to continue their education.
Student Services

Personal Counseling
Counselors are available from 8:00 a.m. to 8:00 p.m., Monday through Thursday and 8:00 am to 5:00 pm on Friday, to provide confidential counseling to all students who need assistance in solving personal problems that interfere with their academic success. Counselors provide confidential referral services to meet such needs as alcohol/substance abuse, stress management, financial planning and family violence. The CCC&TI foundation provides funds to pay for private counseling services for students referred by a CCC&TI counselor.

Educational Advisement
Student Services provides assistance to help students with problems associated with transferring to other institutions.

Housing
The college does not have housing facilities and does not find housing for students.

Transportation
The college provides no transportation service for students. There are no buses or other forms of public transportation, so students must have their own forms of transportation and/or participate in carpool.

Career Services
The Career Services department at CCC&TI is designed to offer a comprehensive set of services related to career exploration and decision-making, educational and career planning, and student employment services. Services include:

• counseling for career and education planning
• vocational assessments
• computerized career guidance and information
• local, state and national job listings
• job interview referral services
• assistance with resume preparation and job interview practice
• internships, and other work experience opportunities

Services are available at no cost to students, prospective students, and former students. Comparable services are also available on the Watauga Campus.

TRiO Programs
Federally-funded TRIO comprises various programs which, since 1965, have promoted opportunity in education. The TRIO office consists of Student Support Services (at CCC&TI since 1993) and Educational Talent Search (at CCC&TI since 2002). Its purpose is to:

• provide general and strategic direction for SSS and ETS
• leverage the strengths of each program for the benefit of both
• explore new ways that TRIO programs can support the mission of CCC&TI
and open educational opportunities for all.

**Student Support Services**

Student Support Services is a TRIO program whose aim is to provide additional services to first-generation college students with financial need, or disabled students who demonstrate need for academic support and are enrolled in an associate degree program. Components of the program include:

- regular opportunities for student faculty interaction at mentoring lunches
- a study skills course
- tutoring and mentoring
- financial aid and transfer advisement
- academic, career and personal counseling
- participation in extra-curricular and cultural enrichment activities
- opportunity for SSS work-scholar positions

**Educational Talent Search**

The second TRIO program is Educational Talent Search (ETS), whose purpose is to get academically talented students enrolled in post-secondary studies. Working with 600 middle- and high-school students from Caldwell County Public Schools, ETS provides information about college, financial aid, and career exploration. Services include

- tutoring
- study skills and strategies for success in school
- trips to college campuses
- cultural enrichment activities
- help with college applications
- information on scholarships and the FAFSA
- an opportunity to apply for the G. Lewis Bernhardt Scholarship, reserved only for ETS students.

**Academic Support Center**

The Academic Support Center on the Caldwell Campus offers a variety of services to enhance student learning. These services include the following:

- free tutoring in areas such as English, math, accounting and other subjects as needed
- interactive computer tutorials in a range of subject areas
- word processing as printers for typing papers
- internet access
- video tutorials
- reading labs
- workshops on grammar, writing and study skills
- review material for CPT placement tests, GRE, SAT and PRAXIS
- study skills

The Support Center is located in F-146 on the Caldwell campus and in room 110 in the instructional building on the Watauga campus. All services are free to students enrolled in Caldwell Community College and Technical Institute and appointments are not necessary. Students may reach the Academic Support Center by calling 726-2725 or 297-3811. Instructors and tutors are available to assist students if they need help. Special tutors are provided for students with language barriers and disabling condi-
The Broyhill Center for Learning Resources
The purpose of the Broyhill Center for Learning Resources is to support the established objectives of the total educational program through a collection of print and nonprint media and audiovisual equipment, through orientation and through reference services. Students are encouraged to look upon the center as an extension of their classroom instruction. The center has study stations and resources to support and to provide for recreational reading, listening, and viewing. In addition, the center staff is always ready to be of assistance.

Testing Center
The purpose of CCC&TI’s testing program is to provide appropriate, fair, accessible, and reliable testing services to students, faculty, and staff in a manner which is in keeping with the college’s mission to provide comprehensive student support services. All new students are referred to this area for placement inventories which determine appropriate beginning courses in English, math, and reading. Adult High School Diploma and GED tests are also administered by the testing center. Instructor make-up tests are administered through the testing center for students who have missed a regularly scheduled test in the classroom and for students taking individualized instruction.

Identification Cards
Identification cards are required for all CCC&TI students, faculty and staff. Student cards will be made during the registration process and must be carried at all times for identification at request of any college official, student leader or security personnel. Eventually, these cards will be required for access to computer labs, libraries, and other relevant access points. A $10.00 fee will be charged for replacement cards. For more information on identification cards, contact the Student Services Department.

Student Rights, Responsibilities and Code of Conduct
Freedom to teach and freedom to learn are inseparable facets of academic freedom. The freedom to learn depends upon appropriate opportunities and conditions in the classroom, on the campus, and in the community. Students should exercise their freedom with responsibility. As members of the academic community, students are subject to the obligations which accrue to them by virtue of this membership. As members of the larger community of which the college is a part, students are entitled to all rights and protection accorded them by the laws of that community. By the same token, students are also subject to all laws, the enforcement of which is the responsibility of duly constituted authorities. When students violate laws, they may incur penalties prescribed by legal authorities. In such instance, college discipline will be initiated only when the presence of the student on campus will disrupt the educational process of the college. However, when a student’s violation of the law also adversely affects the college’s pursuit of its recognized educational objectives, the college may enforce its own regulations. When students violate college regulations, they are subject to disciplinary action by the college whether or not their conduct violates the law. If a student’s behavior simultaneously violates both college regulations and the law, the college may take disciplinary action independent of that taken by legal authorities.
Student Rights

- All rights and privileges guaranteed to every citizen by the Constitution of the United States and by the state of North Carolina shall not be denied any student.
- Student performance will be evaluated solely on an academic basis, not on opinions or conduct in matters unrelated to academic standards.
- Students have the right to freedom of expression, inquiry, and assembly without restraint or censorship subject to reasonable and non-discriminatory rules and regulations regarding time, place, and manner.
- Students have the right to inquire about and to propose improvements in policies, regulations and procedures affecting the welfare of students through established student government procedures, campus committees, and college offices.
- Students and former students have the right to review their official records and to request a hearing if they challenge the contents of these records.
- No disciplinary sanctions other than temporary removal from class or activity (only for duration of said activity) may be imposed upon any student without due process. Due process procedures are established to guarantee a student accused of a student code of conduct violation the right to a hearing, a presentation of charges, evidence for charges, the right to present evidence, the right to have witnesses on one’s behalf and to hear witnesses on behalf of the accuser(s), the right to counsel, and the right of appeal.

Student Code of Conduct

The college reserves the right to maintain a safe and orderly educational environment for students and staff. Therefore, when, in the judgment of college officials, a student’s conduct disrupts or threatens to disrupt the college community, appropriate disciplinary action will be taken to restore and protect the sanctity of the community. Students are expected to conduct themselves in accordance with generally accepted standards of scholarship and morality. The purpose of this code is not to restrict student rights but to protect the rights of individuals in their academic pursuits.

- Academic Dishonesty - (See Academic Integrity Policy) A second violation of the CCC&TI Academic Integrity Policy shall be treated as a disciplinary issue carrying severe consequences.
- Theft of, misuse of, or damage 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 college functions; unauthorized entry upon the property of the college or into a college facility or a portion thereof which has been restricted in use and thereby placed off limits; unauthorized presence in a college facility after closing hours.
- Possession of or use of alcoholic beverages or being in a state of intoxication on the college campus or at college-sponsored or supervised functions off campus or in college-owned vehicles. Possession, use or distribution of any illegal drugs, except as expressly permitted by law. Any influence which may be attributed to the use of drugs or of alcoholic beverages shall not in any way limit the responsibility of the individual for the consequences of his/her
actions.

- Lewd or indecent conduct, including public physical or verbal action or distribution of obscene or libelous written material.
- Mental or physical abuse of any person on college premises or at college-sponsored or college-supervised functions, including verbal or physical actions which threaten or endanger the health or safety of any such persons or which promote hatred or racial prejudice.
- Any act, comment, or behavior which is of a sexually suggestive or harassing nature and which in any way interferes with a student’s or an employee’s performance or creates an intimidating, hostile or offensive environment.
- Any act or misuse of technology that is directly prohibited by the current computer usage policy.
- Intentional obstruction or disruption of teaching, research, administration or disciplinary proceedings or other college activities, including public service functions and other duly authorized activities on college premises.
- 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.
- Participating in or conducting an assembly, demonstration or gathering in a manner which threatens or causes injury to person or property; which interferes with free access to, ingress or egress of college facilities; or which is harmful, obstructive or disruptive to the educational process or institutional functions of the college; remaining at the scene of such an assembly after being asked to leave by a representative of the college staff.
- Possession or use of a firearm, incendiary device or explosive, except in connection with a college-approved activity. This also includes unauthorized use of any instrument designed to inflict serious bodily injury to any person.
- Setting off a fire alarm or using or tampering with any fire safety equipment, except with reasonable belief in the need for such alarm or equipment.
- Gambling.
- Eating, drinking, or smoking in classrooms, shops, and labs or other unauthorized areas.
- Violation of college regulations regarding the operation and parking of motor vehicles.
- Forgery, alteration, or misuse of college documents, records, or instruments of identification with intent to deceive.
- Failure to comply with instructions of college officials acting in performance of their duties.
- Violation of the terms of disciplinary probation or any college regulation during the period of probation.
- Fiscal irresponsibility such as failure to pay college-levied fines, failure to repay college-funded loans or the passing of worthless checks to college officials. The college will not accept checks from students who have written the college a check with insufficient funds.
- Violation of a local, state or federal criminal law on college premises adversely affecting the college community’s pursuit of its proper educational
purposes.
• Any conduct which materially and adversely affects the educational process.
• Any physical, emotional or behavioral problems which adversely affects the safety of students and the educational process.

Disciplinary Procedures

Immediate Suspension
If an act of misconduct threatens the health or well-being of any member of the academic community or seriously disrupts the function and good order of the college, an instructor or administrative officer may direct students involved to cease and desist such conduct and advise them that failing to cease and desist will result in immediate suspension. If the students fail to cease and desist, the instructor or administrative officer may then suspend them from the class or the college until a resolution of the matter can be made. Prior to suspension, the student(s) shall be given the opportunity to explain his or her conduct to the suspending instructor or administrative officer.

The instructor or administrative officer invoking such suspension shall notify the vice president of student services in writing of the individuals involved and the nature of the infraction as soon as possible but no more than two days following the incident. The vice president of student services, responsible for implementing student discipline procedures, shall resolve the matter in a timely fashion utilizing the steps outlined below. In order to provide an orderly procedure for handling student disciplinary cases in accordance with due process and justice, the following procedures will be followed:

Charges
Any administrative official, faculty member, or student may file charges with the vice president of student services against any student or student organization for violations of college regulations. The individual(s) making the charge must make the following information available to the vice president of student services:
• name of the student(s) involved.
• the alleged violation of the specific code of conduct.
• the time, place, and date of the incident.
• the name(s) of person(s) directly involved or witnesses to the infractions.
• any action taken that related to the matter.
• desired solution.

Investigation and Decision
Within 5 working days after the charge is filed, the vice president of student services shall complete a preliminary investigation of the charge and shall schedule a meeting with the student. After discussing the alleged infraction with the student, the vice president of student services may act as follows:
• Drop the charges.
• Impose a sanction consistent with those shown below.
• Refer the student to a college office or community agency for services.
Notification
The decision of the vice president of student services shall be presented to the student in writing immediately following the meeting with the student. In instances where the student cannot be reached to schedule an appointment with the vice president or where the student refuses to cooperate, the vice president of student services shall send a certified letter to the student’s last known address providing the student with a list of the charges, the dean’s decision, and instructions governing the appeal process.

Sanctions
The vice president of student services may apply the following sanctions as appropriate:

Reprimand
A written communication which gives official notice to the student that any subsequent offense against the Student Code of Conduct will carry heavier penalties because of this prior infraction.

General Probation
An individual may be placed on General Probation when involved in a minor disciplinary offense. General Probation has two important implications: The individual is given a chance to show his/her capability and willingness to observe the Student Code of Conduct without further penalty; secondly, if he/she errs again, further action will be taken. This probation will be in effect for no more than two semesters.

Restrictive Probation
Restrictive Probation results in loss of good standing and becomes a matter of record. Restrictive conditions may limit activity in the college community. Generally, the individual will not be eligible for initiation into any local or national organization and may not receive any college award or other honorary recognition. The individual may not occupy a position of leadership or responsibility with any college or student organization, publication, or activity. This probation will be in effect for not less than two semesters. Any violation of Restrictive Probation may result in immediate suspension.

Restitution
The student must pay for damaging, misusing, destroying or losing property belonging to the college, college personnel, or students.

Interim Suspension
Students will be excluded from class and/or other privileges or activities as set forth in the notice, until a final decision has been made concerning the alleged violation.

Loss of Academic Credit or Grade
This punishment is imposed as a result of academic dishonesty (as determined by the Grade Appeal Procedure).

Withholding Transcript, Diploma, or Right to Register
This sanction is imposed when financial obligations are not met.

**Suspension**

The student is excluded from class(es) and/or all other privileges or activities of the college for a specified period of time. This sanction is reserved for those offenses warranting discipline more severe than probation or for repeated misconduct. Students who receive this sanction must get specific written permission from the vice president of student services before returning to the college campus.

**Expulsion**

The student is dismissed from campus for an indefinite period. The student loses his/her student status. The student may be re-admitted to the college only with the approval of the president.

**Group Probation**

This sanction is given to a college club or other organized group for a specified period of time. If group violations are repeated during the term of the sentence, the charter may be revoked or activities restricted.

**Group Restriction**

A club or other organization is removed from college recognition during the semester in which the offense occurred or for a longer period (usually not more than one other semester). While under restriction, the group may not seek or add members, hold or sponsor events in the college community, or engage in other activities as specified.

**Group Charter Revocation**

This sanction involves removal of college recognition for a group, club, society, or other organization for a minimum of two years. Recharter after that time must be approved by the president.

**Appeals Procedure**

A student who disagrees with the decision of the vice president of student services may file a formal grievance as outlined below.

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**Grievance Procedures**

From time to time within any organization, individuals may feel that they have been treated in an unjust manner. These individuals should have an opportunity to express this concern freely and ultimately to have the situation resolved. Caldwell Community College and Technical Institute in the past has attempted, in good faith, to resolve complaints and problems of its members - whether students, faculty or staff —in an informal manner utilizing whatever resources were needed to accomplish that end. In order to provide for the resolution of problems that cannot be resolved in an informal manner, the college has adopted a formal procedure.

This procedure is to be followed in any situation in which faculty, staff, and/or students feel that they have been discriminated against or treated unjustly. The Grievance
Committee will consist of four permanent members and three members selected at the time a grievance is presented. The chairperson and secretary will be appointed at the first meeting called by the president or by the chairman of the board of trustees if the grievance is related to the president. The four permanent members will serve for two years; and, in order to provide continuity, initially two members will be appointed for two years and two members will serve one year. The parties involved may challenge the impartiality of any of the seven members selected by the president or by the chairman of the board of trustees. The committee will act as a hearing committee for all grievances other than those dealing with dismissal of employees. A separate procedure is established for this purpose. Every attempt should be made to resolve problems in an informal manner, and only when all else fails, should the formal procedure be utilized.

A. Definition of Grievance
The term “grievance” shall mean an allegation that there has been a claimed violation, misinterpretation, or misapplication of rules or regulations, existing policy, or orders of the college affecting the terms and conditions of the employment, including a complaint by a student or employee that he/she has been treated unfairly or inequitably by reason of any act or condition including those relative to students’ or employees’ health and safety.

B. Purpose
The purpose of this procedure is to assure prompt and equitable solution of grievances and to provide a vehicle for settlement thereof. It is agreed that the individual is entitled to the utilization of the grievance procedure and to representation. He/she shall not be coerced or intimidated or suffer any reprisal as a direct or indirect result of its use.

C. Informal Procedure
Any individual may orally present and discuss his/her complaint with his/her immediate supervisor, faculty/staff member, and/or department chair on an informal basis. The student or the employee may request representation. Should an informal discussion not produce a satisfactory settlement, the grievant may move the grievance to the first formal step.

D. Formal Grievance Procedure
A grievance shall be presented and adjusted in accordance with the steps outlined below. The formal procedure begins when the grievance is put in writing to the appropriate party.

Step One:  In the event the matter is not resolved informally, the employee may submit the grievance in writing to the immediate supervisor; the student may submit the grievance to the vice president of student services, who shall hear the grievance and render a decision.

Step Two:  If the decision rendered at step 1 is not satisfactory, the grievance may be submitted in writing to the appropriate department chair who shall hear the grievance and render a decision.

Step Three:  If the grievance is not resolved satisfactorily in step 2, it may be
appealed to the grievance committee, who will make recommendations to the president or to the chairman of the board of trustees should the president be involved in the grievance. At that time, a decision will be rendered. The decision issuing therefrom shall be binding on all parties.

E. Time Sequence for Filing and Decision

1. A copy of the grievance must be filed as provided in Step One within twenty (20) days from the date on which the act, or purported act, which is the subject of the grievance, occurred.
2. References to days in this procedure are working days of the party to whom they apply.
3. Should a grievance not be satisfactorily resolved or should no decision be forthcoming in the time prescribed in paragraph 7 below, the grievance may, within five (5) working days, be submitted to the next step.
4. Where the subject or the grievance suggests it is appropriate and where the parties mutually agree, such grievance may be initiated at or moved to step 2 or step 3 without a hearing at a lower step(s).
5. If the finding or resolution of a grievance at any step in the grievance procedure is not appealed within ten (10) days, said grievance will be considered settled on the basis of the last answer provided, and there shall be no further appeal or review. Should the institution not respond within the prescribed time, the grievant may exercise the option to proceed to the next step.
6. Time limits under the procedure may be changed by mutual agreement only.
7. Decisions after a scheduled grievance hearing shall be rendered in writing within the time limits below:
   a. Step One within five (5) days after a decision has been rendered;
   b. Step Two within ten (10) days of the receipt of the appeal from the Step One decision;
   c. Step Three within ten (10) days of the receipt of the appeal from the Step Two decision;

Crime Awareness and Campus Security

Prospective and current students who would like information concerning campus policies and procedures relating to The Crime Awareness and Campus Security Act of 1990 may request a copy of the college’s safety plan on file in the office of the vice president of facilities services. In addition, information may be found in the Student Handbook.

Parking Regulations

- Parking for students, faculty, and staff on the Caldwell campus is on a first-come, first-served basis except for certain designated areas.
- Students, faculty, and staff must register all vehicles they expect to use on campus. Parking stickers must be displayed on the left rear bumper of the automobile or taped in the bottom left corner of the rear windshield.
Temporary handicapped parking permits are issued by NC License Tag Bureau. Students are responsible for being aware of all traffic and parking regulations as outlined in the Student Policy manual, located in the LRC, Students Services, and the SGA office. Lack of knowledge of these regulations will not justify forgiveness of penalties for violations.

Student Activities and Organizations

Student Government Association
The Student Government Association (SGA) is composed of all students who enroll in curriculum programs at the college. Officers are elected each year to serve the student body in promoting various activities and opportunities for out-of-class learning, social contacts, entertainment, and self-governance. The SGA also plans, organizes and conducts a variety of student-centered activities throughout the school year. The elected officers strive to promote the general welfare of the students in a democratic fashion. A copy of the SGA constitution may be found in the SGA Office or Student Activities Office located in E-118 and E-121.

Clubs and Organizations
The following various clubs and organizations have been developed by students at the college:

General Interest Clubs
Any group of students may create a new club by following the steps outlined in the Student Government constitution. (See Student Government advisor.)
Alpha Omega (Christian fellowship)
Circle K
Ebony Kinship
Phi Theta Kappa
Ecology
Student Ambassadors
Theatre Arts Club
Varsity Club

Departmental/Subject-Related Clubs
Aviation Club (Blue Ridge Flying Eagles)
Bio-Med Club
Business Club
Communications Club
Cosmetology Club
FNCOP (Law Enforcement Club)
Nuclear Medicine Club
Omega Rho Sigma (Ophthalmic Asst.)
Paralegal Club
Physical Therapist Assistant Club
Registered Nursing Students (SNA-RN)
Science Club
Sigma Tau Omega (Radiology)
Sonography Club
Student Nurses
Student Support Services

Intramurals
Various intramural sports opportunities are available for students, faculty, and staff at the college. Volleyball, tennis, ping pong, shuffleboard, badminton, basketball, and frisbee football are among the intramural offerings during each year. Students interested in participating should contact the intramural coordinator in E-121 and watch for announcements.

Intercollegiate Sports
CCC&TI participates in intercollegiate athletics on a limited basis during fall and spring semesters. The sports may include:
- NJCAA Women’s Volleyball
- NJCAA Basketball
- Cheerleading

Student Activities
Personal and social development is as important a part of education as academic improvement, and the college is committed to providing various student activities on campus to encourage development in these areas. In order to finance these activities, a student activity fee is charged to each student. The fee is used to support such activities and organizations as the following: campus clubs; dances; cookouts; picnics; intercollegiate athletics; intramurals; purchase and maintenance of the television set, pool tables, and related equipment; student government activities; scholarships; trophies; speakers; film series; a variety of cultural programs; skiing excursions; and a variety of miscellaneous activities. Students who wish to initiate new activities should contact the Student Government Association for assistance.

Student Ambassadors
The CCC&TI Student Ambassadors are a select group of students demonstrating academic excellence who represent the college at a variety of events. Nominated by faculty members, the ambassadors serve CCC&TI by conducting campus tours, assisting with special events, mentoring students and representing the college at a variety of campus and community activities. Students eligible for nomination must have a minimum grade point average of 3.0.

Performance Measures and Standards
In February 1999, the North Carolina the State Board of Community Colleges developed twelve performance measures for accountability that focus primarily on student success. These measures and standards were accepted and approved by the full State Board in May 2000 for implementation in the fiscal year 2000-2001. Each college is required to publish performance on the twelve measures annually in its electronic cat-
alog or on the Internet, and in its printed catalog each time the catalog is reprinted. The twelve Performance Measures and Standards and the results for the 2001-2002 fiscal year are:

1. **Progress of Basic Skills Students** - Progress is defined as 1) progressing within a level of literacy, 2) completing the level entered or a predetermined goal, and 3) completing the level entered and advancing to a higher level. The standard for this measure is 75%.

   *CCC&TI met this measure for the year.*

2. **Passing Rates for Licensure and Certification** - Licensure and Certification is based on first-time test-takers from community colleges passing an examination required for North Carolina licensure or certification prior to practicing the profession. The standard for this measure is an aggregate institutional passing rate of 80% for all first-time takers of licensure/certification examinations, plus no passing rate falling below 70% for any single examination.

   *With an aggregate of 83%, CCC&TI met the first requirement of this measure for the year.*

3. **Goal Completion of Program Completers** - This measure is defined as the portion of graduates of certificate, diploma, and degree programs who report that their primary goal in attending has been met. The standard for this measure is 90% of program completers will report goal completion.

   *CCC&TI had a rate of 98% and this measure was met for the year.*

4. **Employment Status of Graduates** - This measure is defined as the proportion of identified community college completers who are employed within one year of last attendance. The standard for this measure, 96%, is adjusted for the average annual unemployment rate in the service area of each college.

   *Of the 2002 graduates, 98.7% were employed within one year of last attendance and this measure was met for the year.*

5. **Performance of Students Who Transfer to the University System** - This measure compares the performance of community college students who transfer to public North Carolina universities with students native to the four-year institution. The standard for this measure is that the performance of community college students will be equivalent to native UNC sophomores and juniors.

   *CCC&TI graduates performed better than UNC native students and met this measure for the year, while students completing 24 hours or more did not meet the standard.*
6. **Passing Rates of Students in Developmental Courses** - The passing rates include all developmental English, mathematics, and reading. The standard for this measure is 70%.

*CCC&TI met this measure for the year.*

7. **Success Rate of Developmental Students in Subsequent College-Level Courses** - The performance of developmental students in subsequent college-level courses will be compared to the performance of non-development students in those courses. The standard for this measure is that there should be no statistically significant difference in the performance of developmental students as compared to non-development students.

*CCC&TI met this measure for the year.*

8. **Student Satisfaction of Program Completers and Non-Completers** - This indicator reports the proportion of graduates and early-leavers who indicate that the quality of the college programs and services met or exceeded their expectations. The standard for this measure is 90% satisfaction rate.

*CCC&TI had a combined rate of 98% and this measure was met for the year.*

9. **Curriculum Student Retention and Graduation** - This composite measure consists of 1) number completing a curriculum program with a certificate, diploma, or degree and 2) number who have not completed a program but who are continuing enrollment in either curriculum or occupational extension programs. The standard for this measure is 60% of the defined cohort will graduate or be retained.

*CCC&TI had a combined rate of 66% and this measure was met for the year.*

10. **Employer Satisfaction** - This measure consists of a sample of businesses in the service area who employ community college students indicating whether or not their expectations have been met. The standard for this measure is 85% of employers reporting they are satisfied with preparation of community college students.

*Employers of graduates reported a 97% satisfaction rate and this measure was met for the year.*

11. **Business/Industry Satisfaction with Services Provided** - This measure consists of a sample of businesses/industries in the service area that have received services from a community college indicating that whether or not their expectations have been met. The standard for this measure is 90% will report being satisfied with the services provided.
Employers reported 100% satisfaction with business/industry services and this measure was met for the year.

12. Program Enrollment - This indicator measures the annual number of unduplicated students enrolled in a given curriculum program. The current fixed standard of an average of 10 students over a three-year period is recommended.

CCC&TI had 3 programs that averaged less than 10 students per year over the three-year period.
Programs of Study

Associate in Applied Science Degree Programs

The Associate in Applied Science degree programs are designed to prepare persons for technician-level occupations. More emphasis is given to theory than in diploma courses. Also, roughly one-half of the course requirements are in general education and the sciences underlying the particular occupational area. A core of general competencies in reading, writing, oral communications, mathematics, and the use of computers must be met by all graduates of a degree program. These requirements are met by completing the following courses: Reading - proficiency exam or completion of RED 090; Writing - ENG 111 and 113 or 114; Oral Communication - COM 120 or 231; Mathematics - proficiency exam or math course; and computer courses - CIS 110, 111, or 113. CCC&TI offers the following Associate in Applied Science degree programs:

- Accounting*
- Automotive Systems Technology
- Aviation Management and Career Pilot Technology
- Biomedical Equipment Technology ▲
- Business Administration*
- Business Administration - Electronic Commerce
- Cardiovascular Sonography
- Computer Programming
- Cosmetology
- Early Childhood Associate*
- Electronics Engineering Technology
- Emergency Preparedness Technology
- Information Systems*
- Information Systems: Network Administration and Support
- Internet Technologies*
- Landscape Gardening*
- Mechanical Engineering Technology: Drafting and Design
- Medical Office Administration *
- Medical Sonography
- Nuclear Medicine Technology
- Associate Degree Nursing *
- Office Systems Technology *
- Paralegal Technology
- Physical Therapist Assistant
- Radiography
- Speech Language Pathology Assistant

63
Diploma and Certificate Programs

Diploma and certificate programs are designed to prepare persons for trade-level occupations. Emphasis is given to the development of manipulative skills. CCC&TI offers the following programs:

**Diploma Programs**
- Accounting *
- Autobody Repair
- Automotive Systems Technology
- Business Administration *
- Computed Tomography and Magnetic Resonance Imaging Technology
- Cosmetology
- Early Childhood Associate *
- Electrical/Electronics Technology
- EPT - Fire Service Concentration
- General Occupational Technology *
- Heavy Equipment and Transport Technology
- Industrial Management Technology
- Information Systems *
- Landscape Gardening *
- Medical Office Administration *
- Office Systems Technology *
- Ophthalmic Medical Assistant

**Certificate Programs**
- Accounting–Accounting Applications*
- Accounting–Basic Income Tax*
- Autobody Repair - Basic
- Autobody Repair - Intermediate
- Automotive Systems Technology
- Aviation Management and Career Pilot Technology
- Basic Law Enforcement Training
- Business Adm: Management *
- Business Adm: Marketing *
- Cardiovascular Sonography
- Child Care Operator *
- Computed Tomography and Magnetic Resonance Imaging Technology
- Cosmetology
- Cosmetology Instructor
Echocardiography
Electrical/Electronics Technology
EPT - Emergency Management Concentration
Heavy Equipment and Transport Technology
Information Systems - Hardware Support Specialist *
Information Systems - Software Support Specialist *
Information Systems - Web-Site Developer *
Information Systems - Cisco CCNA Preparation *
Landscape Gardening–General *
Landscape Gardening–Production *
Landscape Gardening–Installation and Maintenance *
Manicuring/Nail Technology
Manicure Instructor
Mechanical Engineering Technology
Nursing Assistant ▲
Office Systems Technology: Receptionist *
Office Systems Technology: Software Applications *
Office Systems Technology: Word Processing Clerk *
Paralegal Technology: Family Law
Paralegal Technology: Wills and Estates
School-Age Provider *
Surveying Technology
Teacher/Caregiver *
Truck Driving Training *

* Program available at the Watauga Campus.
▲ Collaborative Agreement Programs
Special Coding System

F  Course will be offered Fall Semester.
S  Course will be offered Spring Semester.
SS Course will be offered Summer Semester.
D  Course will be offered when sufficient students and instructor are available.
The numbers to the right of the course title represent the following: class, lab, credit. For example:

<table>
<thead>
<tr>
<th>Class</th>
<th>Lab</th>
<th>Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 111</td>
<td>Expository Writing</td>
<td>3</td>
</tr>
</tbody>
</table>

In order to determine contact hours, class hours and lab hours are added. Note: Minimum reading requirements must be completed for all programs. Graduates from diploma and certificate programs in the vocational area must have a reading score of 65 or better or must have successfully completed RED 080 - Introduction to College Reading.
Accounting (A2510)
Associate's Degree Program

Career Information
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, individuals may advance in the accounting profession.

### Fall Semester I

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACA 111</td>
<td>College Student Success</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>ACC 120</td>
<td>Principles of Financial Accounting</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>ACC 129</td>
<td>Individual Income Taxes</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>BUS 110</td>
<td>Introduction to Business</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>ENG 111</td>
<td>Expository Writing</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>ENG 111A</td>
<td>Expository Writing Lab</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td><strong>Semester Total</strong></td>
<td></td>
<td><strong>13</strong></td>
<td><strong>8</strong></td>
</tr>
</tbody>
</table>

### Spring Semester I

<table>
<thead>
<tr>
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<th>Course Title</th>
<th>Credits</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACC 121</td>
<td>Principles of Managerial Accounting</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>ACC 130</td>
<td>Business Income Taxes</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>ACC 140</td>
<td>Payroll Accounting</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Course</td>
<td>Credits</td>
<td></td>
<td></td>
</tr>
<tr>
<td>--------</td>
<td>---------</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ENG 113</td>
<td>Literature-Based Research</td>
<td></td>
<td></td>
</tr>
<tr>
<td>or ENG 114</td>
<td>Professional Research &amp; Report</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MAT 115</td>
<td>Mathematical Models</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Semester Total</strong></td>
<td>11 8 15</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Summer Semester I**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACC 150</td>
<td>Accounting Software Applications</td>
</tr>
<tr>
<td>BUS 115</td>
<td>Business Law I</td>
</tr>
<tr>
<td>OST 122</td>
<td>Office Computations</td>
</tr>
<tr>
<td>Social Science Elective</td>
<td>3 0 3</td>
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<tr>
<td><strong>Semester Total</strong></td>
<td>8 4 10</td>
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</table>

**Fall Semester II**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACC 122</td>
<td>Principles of Financial Accounting II</td>
</tr>
<tr>
<td>ACC 225</td>
<td>Cost Accounting</td>
</tr>
<tr>
<td>BUS 240</td>
<td>Business Ethics</td>
</tr>
<tr>
<td>COM 120</td>
<td>Interpersonal Communication</td>
</tr>
<tr>
<td>ECO 151</td>
<td>Survey of Economics</td>
</tr>
<tr>
<td>or ECO 251</td>
<td>Principles of Microeconomics</td>
</tr>
<tr>
<td>or ECO 252</td>
<td>Principles of Macroeconomics</td>
</tr>
<tr>
<td>Humanities/Fine Arts Elective</td>
<td>3 0 3</td>
</tr>
<tr>
<td><strong>Semester Total</strong></td>
<td>18 0 18</td>
</tr>
</tbody>
</table>

**Spring Semester II**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACC 149</td>
<td>Intro to Accounting Spreadsheets</td>
</tr>
<tr>
<td>ACC 220</td>
<td>Intermediate Accounting I</td>
</tr>
<tr>
<td>ACC 268</td>
<td>Info. Systems and Internal Control</td>
</tr>
<tr>
<td>BUS 270</td>
<td>Professional Development</td>
</tr>
<tr>
<td>CIS 152</td>
<td>Database Concepts</td>
</tr>
<tr>
<td><strong>Semester Total</strong></td>
<td>12 6 15</td>
</tr>
</tbody>
</table>

**Total Hours** 62 26 75

* Upon approval by academic advisor and division dean, cooperative education experience may be substituted for selected courses. Consult the division dean for details.
# Accounting (D25100)
## Diploma Program

### Fall Semester I
<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACA 111</td>
<td>College Student Success</td>
<td>1</td>
</tr>
<tr>
<td>ACC 120</td>
<td>Principles of Financial Accounting</td>
<td>3</td>
</tr>
<tr>
<td>ACC 129</td>
<td>Individual Income Taxes</td>
<td>2</td>
</tr>
<tr>
<td>BUS 110</td>
<td>Introduction to Business</td>
<td>3</td>
</tr>
<tr>
<td>CIS 111</td>
<td>Basic PC Literacy</td>
<td>2</td>
</tr>
<tr>
<td>ENG 111</td>
<td>Expository Writing</td>
<td>3</td>
</tr>
<tr>
<td>ENG 111A</td>
<td>Expository Writing Lab</td>
<td>0</td>
</tr>
</tbody>
</table>

**Semester Total**: 13 8 17

### Spring Semester I
<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACC 121</td>
<td>Principles of Managerial Accounting</td>
<td>3</td>
</tr>
<tr>
<td>ACC 140</td>
<td>Payroll Accounting</td>
<td>1</td>
</tr>
<tr>
<td>ACC 149</td>
<td>Intro to Accounting Spreadsheets</td>
<td>1</td>
</tr>
<tr>
<td>BUS 270</td>
<td>Professional Development</td>
<td>3</td>
</tr>
<tr>
<td>CIS 120</td>
<td>Interpersonal Communication</td>
<td>3</td>
</tr>
</tbody>
</table>

**Semester Total**: 11 6 14

### Summer Semester I
<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACC 150</td>
<td>Accounting Software Applications</td>
<td>1</td>
</tr>
<tr>
<td>BUS 115</td>
<td>Business Law I</td>
<td>3</td>
</tr>
<tr>
<td>OST 122</td>
<td>Office Computations</td>
<td>1</td>
</tr>
</tbody>
</table>

**Semester Total**: 5 4 7

**Total Hours**: 29 18 38

* Upon approval by academic advisor and division dean, cooperative education experience may be substituted for selected courses. Consult the division dean for details.

**Note**: Minimum reading requirements must be completed for all programs. Graduates from diploma and certificate programs in the technical area must have a reading score of 83 or better or must have successfully completed RED 090 - Improved College Reading.
# Accounting—Basic Income Tax (C25100B)

## Certificate Program

### Fall Semester I
- ACC 120 Principles of Financial Accounting 3 2 4
- ACC 129 Individual Income Taxes 2 2 3
- Semester Total 5 4 7

### Spring Semester I
- ACC 121 Principles of Managerial Accounting 3 2 4
- ACC 130 Business Income Taxes 2 2 3
- ACC 140 Payroll Accounting 1 2 2
- Semester Total 6 6 9
- Total Hours 11 10 16

# Accounting—Accounting Applications (C25100A)

## Certificate Program

### Fall Semester I
- ACC 120 Principles of Financial Accounting 3 2 4
- CIS 111 Basic PC Literacy 1 2 2
- Semester Total 4 4 6

### Spring Semester I
- ACC 140 Payroll Accounting 1 2 2
- ACC 149 Intro to Accounting Spreadsheets 1 2 2
- CIS 152 Database Concepts 2 2 3
- Semester Total 4 6 7

### Summer Semester I
- ACC 150 Accounting Software Applications 1 2 2
- OST 122 Office Computations 1 2 2
- Semester Total 2 4 4

- Total Hours 10 14 17
Career Information

The Autobody Repair curriculum provides training in the use of equipment and materials of the autobody repair trade. The student studies the construction of the automotive body and techniques of autobody repairing, rebuilding, and refinishing. The course work includes autobody fundamentals, industry overview, and safety. Students will perform hands-on repairs in the areas of non-structural and structural repairs, mig welding, plastics and adhesives, refinishing, and other related areas. Graduates of the curriculum should qualify for entry-level employment opportunities in the automotive body and refinishing industry. Graduates may find employment with franchised independent garages or they may become self-employed.

Fall Semester I

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>AUB 111</td>
<td>College Student Success</td>
<td>1</td>
</tr>
<tr>
<td>AUB 134</td>
<td>Autobody MIG Welding</td>
<td>1</td>
</tr>
<tr>
<td>AUB 111</td>
<td>Painting and Refinishing I</td>
<td>2</td>
</tr>
<tr>
<td>AUB 121</td>
<td>Non-Structural Damage I</td>
<td>1</td>
</tr>
<tr>
<td>AUB 131</td>
<td>Structural Damage I</td>
<td>2</td>
</tr>
<tr>
<td>ENG 102</td>
<td>Applied Communications II</td>
<td>3</td>
</tr>
<tr>
<td>Semester Total</td>
<td></td>
<td>10</td>
</tr>
</tbody>
</table>

Spring Semester I

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>AUB 112</td>
<td>Painting and Refinishing II</td>
<td>2</td>
</tr>
<tr>
<td>AUB 122</td>
<td>Non-Structural Damage II</td>
<td>2</td>
</tr>
<tr>
<td>AUB 132</td>
<td>Structural Damage II</td>
<td>2</td>
</tr>
<tr>
<td>AUB 114</td>
<td>Special Finishes</td>
<td>1</td>
</tr>
<tr>
<td>MAT 101</td>
<td>Applied Math I</td>
<td>2</td>
</tr>
<tr>
<td>Semester Total</td>
<td></td>
<td>9</td>
</tr>
</tbody>
</table>
Summer Semester I

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Required Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>AUB 141</td>
<td>Mechanical &amp; Elec. Components</td>
<td>2 2 3</td>
</tr>
<tr>
<td>AUB 162</td>
<td>Autobody Estimating</td>
<td>1 2 2</td>
</tr>
<tr>
<td>CIS 113</td>
<td>Computer Basics</td>
<td>0 2 1</td>
</tr>
<tr>
<td>AUB 136</td>
<td>Plastics and Adhesives</td>
<td>1 4 3</td>
</tr>
<tr>
<td><strong>Semester Total</strong></td>
<td></td>
<td><strong>4 10 9</strong></td>
</tr>
<tr>
<td><strong>Total Hours</strong></td>
<td></td>
<td><strong>23 50 44</strong></td>
</tr>
</tbody>
</table>

* Upon approval by academic advisor and division dean, cooperative education experience may be substituted for selected courses. Consult the division dean for details.

**Note:** Graduates from this program must have a reading score of 65 or better or must have successfully completed RED 080 - Introduction to College Reading.

Basic Autobody Repair Certificate (C60100B)

Certificate Program

A certificate will be awarded upon successful completion (2.00 GPA) of 13 credit hours from requirements listed below:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Required Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>AUB 111</td>
<td>Painting and Refinishing I</td>
<td>2 6 4</td>
</tr>
<tr>
<td>AUB 121</td>
<td>Non-Structural Damage I</td>
<td>1 4 3</td>
</tr>
<tr>
<td>AUB 131</td>
<td>Structural Damage I</td>
<td>2 4 4</td>
</tr>
<tr>
<td>AUB 114</td>
<td>Special Finishes</td>
<td>1 2 2</td>
</tr>
<tr>
<td><strong>Total Hours</strong></td>
<td></td>
<td><strong>6 16 13</strong></td>
</tr>
</tbody>
</table>

**Note:** Graduates from this program must have a reading score of 65 or better or must have successfully completed RED 080 - Introduction to College Reading.

Intermediate Autobody Repair Certificate (C60100I)

Certificate Program

A certificate will be awarded upon successful completion (2.00 GPA) of 18 credit hours from requirements listed as follows:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Required Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>AUB 134</td>
<td>Autobody MIG Welding</td>
<td>1 4 3</td>
</tr>
<tr>
<td>AUB 111</td>
<td>Painting and Refinishing I</td>
<td>2 6 4</td>
</tr>
<tr>
<td>AUB 121</td>
<td>Non-Structural Damage I</td>
<td>1 4 3</td>
</tr>
<tr>
<td>AUB 131</td>
<td>Structural Damage I</td>
<td>2 4 4</td>
</tr>
<tr>
<td>AUB 122</td>
<td>Non-Structural Damage II</td>
<td>2 6 4</td>
</tr>
<tr>
<td><strong>Total Hours</strong></td>
<td></td>
<td><strong>8 24 18</strong></td>
</tr>
</tbody>
</table>

**Note:** Graduates from this program must have a reading score of 65 or better or must have successfully completed RED 080 - Introduction to College Reading.
Automotive Systems Technology (A60160)
Associate in Applied Science Degree

Career Information

The Automotive Systems Technology curriculum prepares individuals for employment as Automotive Services Technicians. It provides an introduction to automotive careers and increases student awareness of the challenges associated with this fast and ever-changing field. Classroom and lab experience integrate technical and academic course work. Emphasis is placed on theory, servicing and operation of brakes, electrical/electronic systems, engine performance, steering/suspension, automatic transmission/transaxles, engine repair, climate control, and manual drive trains. Upon completion of this curriculum, students should be prepared to take the ASE exam and be ready for full-time employment in dealerships and repair shops in the automotive service industry.

Fall Semester I

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACA 111</td>
<td>College Student Success</td>
<td>1</td>
</tr>
<tr>
<td>CIS 113</td>
<td>Computer Basics</td>
<td>0</td>
</tr>
<tr>
<td>ENG 111</td>
<td>Expository Writing</td>
<td>3</td>
</tr>
<tr>
<td>ENG 111A</td>
<td>Expository Writing Lab</td>
<td>0</td>
</tr>
<tr>
<td>AUT 115</td>
<td>Engine Fundamentals</td>
<td>2</td>
</tr>
<tr>
<td>AUT 151</td>
<td>Brake Systems</td>
<td>2</td>
</tr>
<tr>
<td>AUT 152</td>
<td>Brake Systems Lab</td>
<td>0</td>
</tr>
<tr>
<td>AUT 110</td>
<td>Intro To Auto technology</td>
<td>2</td>
</tr>
<tr>
<td>Semester Total</td>
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</table>

Spring Semester I

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 113</td>
<td>Literature-Based Research</td>
<td>3</td>
</tr>
<tr>
<td>or</td>
<td>ENG 114 Professional Research &amp; Report</td>
<td>3</td>
</tr>
<tr>
<td>AUT 183</td>
<td>Engine Performance - Fuels</td>
<td>2</td>
</tr>
<tr>
<td>AUT 184</td>
<td>Engine Performance - Fuels Lab</td>
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<tr>
<td>AUT 161</td>
<td>Electrical Systems</td>
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<tr>
<td>AUT 181</td>
<td>Engine Performance-Electrical</td>
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<td>AUT 182</td>
<td>Engine Performance-Electrical Lab</td>
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<td>Semester Total</td>
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Summer Semester I

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>AUT 131</td>
<td>Drive Trains</td>
<td>2</td>
</tr>
<tr>
<td>AUT 171</td>
<td>Heating and Air Conditioning</td>
<td>2</td>
</tr>
<tr>
<td>AUT 164</td>
<td>Automotive Electronics</td>
<td>2</td>
</tr>
<tr>
<td>Semester Total</td>
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</table>

Fall Semester II

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MAT 121</td>
<td>Algebra/Trigonometry I</td>
<td>2</td>
</tr>
<tr>
<td>AUT 116</td>
<td>Engine Repair</td>
<td>1</td>
</tr>
<tr>
<td>AUT 185</td>
<td>Emission Controls</td>
<td>1</td>
</tr>
<tr>
<td>AUT 231</td>
<td>Manual Drive Trains/Axles</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2</td>
</tr>
</tbody>
</table>
AUT 281  Adv. Engine Performance  2  2  3
Humanities/Fine Arts Elective  3  0  3
Semester Total  11  12  16

Spring Semester II
COM 120  Interpersonal Communication  3  0  3
AUT 221  Automatic Transmissions  2  6  4
AUT 162  Chassis Elect & Electronics  2  2  3
AUT 141  Suspension and Steering Systems  2  4  4
Social Science Elective  3  0  3
Semester Total  12  12  17

Summer Semester II
AUT 271  Adv. Heating and A/C  2  2  3
Semester Total  2  2  3
Total Hours  50  65  76

* Upon approval by academic advisor and division dean, cooperative education experience maybe substituted for selected course. Consult the division dean for details.

Automotive Systems Technology (D60160)

Career Information
The Automotive Systems Technology curriculum prepares individuals for employment as Automotive Services Technicians. It provides an introduction to automotive careers and increases student awareness of the challenges associated with this fast and ever-changing field. Classroom and lab experience integrate technical and academic course work. Emphasis is placed on theory, servicing and operation of brakes, electrical/electronic systems, engine performance, steering/suspension, automatic transmission/transaxles, engine repair, climate control, and manual drive trains. Upon completion of this curriculum, students should be prepared to take the ASE exam and be ready for full-time employment in dealerships and repair shops in the automotive service industry.

Fall Semester I
ACA 111  College Student Success  1  0  1
ENG 102  Applied Communications II  3  0  3
CIS 113  Computer Basics  0  2  1
AUT 115  Engine Fundamentals  2  3  3
AUT 151  Brake Systems  2  2  3
AUT 152  Brake Systems Lab  0  2  1
AUT 110  Intro To Auto technology  2  2  3
Semester Total  10  11  15

Spring Semester I
MAT 101  Applied Math I  2  2  3
AUT 161  Electrical Systems  2  6  4
AUT 181  Engine Performance-Electrical  2  3  3
AUT 182  Engine Performance-Electrical Lab  0  3  1
AUT 183  Engine Performance-Fuels  2  3  3
AUT 184  Engine Performance-Fuels Lab  0  3  1
Semester Total  8  20  15

Summer Semester I
AUT 131  Drive Trains  2  3  3
AUT 171  Heating and Air Conditioning  2  3  3
AUT 164  Automotive Electronics  2  2  3
Semester Total  6  8  9
Total Hours  24  39  39

* Upon approval by academic advisor and division dean, cooperative education experience may be substituted for selected courses. Consult the division dean for details.

Note: Graduates from this program must have a reading score of 65 or better or must have successfully completed RED 080 - Introduction to College Reading.

Automotive Systems Technology Certificate (C60160) Certificate Program

A certificate will be awarded upon successful completion (2.00 GPA) of 15 credit hours from requirements listed below:

AUT 151  Brake Systems  2  2  3
AUT 141  Suspension & Steering Systems  2  4  4
AUT 181  Engine Performance - Electrical  2  3  3
AUT 182  Engine Performance - Elec. Lab  0  3  1
AUT 183  Engine Performance - Fuels  2  3  3
AUT 184  Engine Performance - Fuels Lab  0  3  1
Total Hours  8  18  15

Note: Graduates from this program must have a reading score of 65 or better or must have successfully completed RED 080 - Introduction to College Reading.
Aviation Management and Career Pilot Technology (A60180)
Associate's Degree Program

Career Information

The Aviation Management and Career Pilot Technology curriculum prepares individuals for a variety of aviation and aviation-related careers including commercial airlines, general aviation, aerospace industry, military, and state and federal aviation organizations. Course work includes fundamentals of flight, aerodynamics, aircraft performance, meteorology, navigation, federal regulations, aviation management, instrument and commercial ground training. Optional course work includes flight and simulator training or business management training. Graduates will hold a commercial pilot certificate with an instrument rating or specialize in aviation management. Graduates may find employment as commercial, corporate, and military pilots, fixed base operators, airport managers, instructors, and flight dispatchers.

Special Admission Requirements

- Application
- Placement tests
- High school transcript
- Adult high school diploma or GED
- Transcript of college work
- Interview with program coordinator
- Federal Aviation Administration Medical Certificate
- 17 years of age or older
- Additional requirements for career pilot
### Aviation Management (A60180M)

#### Fall Semester I
- **AER 150** Private Pilot Flight Theory  2  2  3
- **AER 110** Air Navigation  2  2  3
- **AER 113** History of Aviation  2  0  2
- **ENG 111** Expository Writing  3  0  3
- **ENG 111A** Expository Writing Lab  0  2  1
- **MAT 171** Precalculus Algebra  3  0  3
- **MAT 171A** Precalculus Algebra Lab  0  2  1
- **ACA 111** College Student Success  1  0  1

**Semester Total**  13  8  17

#### Spring Semester I
- **AER 160** Instrument Flight Theory  2  2  3
- **AER 111** Aviation Meteorology  3  0  3
- **AER 112** Aviation Law and FARs  2  0  2
- **COM 120** Interpersonal Communication  3  0  3
- **PHY 151** College Physics I  3  2  4
- **ENG 113** Literature-Based Research
  or
  **ENG 114** Professional Research & Report  3  0  3

**Semester Total**  16  4  18

#### Summer Semester I
- **CIS 110** Introduction to Computers  2  2  3
- **Humanities/Fine Arts Elective**  3  0  3

**Semester Total**  5  2  6

#### Fall Semester II
- **ACC 120** Principles of Financial Accounting  3  2  4
- **AER 170** Commercial Flight Theory  3  0  3
- **AER 218** Human Factors in Aviation  2  0  2
- **AER 114** Aviation Management  3  0  3
- **BUS 137** Principles of Management  3  0  3
- **ECO 251** Principles of Microeconomics  3  0  3

**Semester Total**  17  2  18

#### Spring Semester II
- **ACC 121** Principles of Managerial Accounting  3  2  4
- **AER 215** Flight Safety  3  0  3
- **BUS 270** Professional Development  3  0  3
- **ECO 252** Principles of Macroeconomics  3  0  3
  or **Social Science Elective**  3  0  3

**Semester Total**  15  2  16

**Total Hours**  66  18  75

* Upon approval by academic advisor and division dean, cooperative education experience may be substituted for selected courses. Consult the division dean for details.
### Aviation Management & Career Pilot Technology Certificate (C60180)

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<tr>
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<td>Private Pilot Flight Theory</td>
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<tr>
<td>AER 110</td>
<td>Air Navigation</td>
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<tr>
<td>AER 113</td>
<td>History of Aviation</td>
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**Total Hours:** 9.0

**Note:** Graduates from this program must have a reading score of 83 or better or must have successfully completed RED 090 - Improved College Reading.

### Career Pilot Option (A60180P)

#### Fall Semester I

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<td>AER 150</td>
<td>Private Pilot Flight Theory</td>
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<tr>
<td>AER 110</td>
<td>Air Navigation</td>
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<td>AER 113</td>
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<td>ENG 111</td>
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<td>ENG 111A</td>
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<td>MAT 171</td>
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<td>Flight - Instrument Pilot</td>
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<td>PHY 151</td>
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<tr>
<td>ENG 114</td>
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**Semester Total:** 13.0

#### Summer Semester I

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<td>AER 170</td>
<td>Commercial Flight Theory</td>
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<td>AER 216</td>
<td>Engines and Systems</td>
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<td>AER 218</td>
<td>Human Factors in Aviation</td>
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<td>Aviation Management</td>
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<td>COM 120</td>
<td>Interpersonal Communication</td>
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### Spring Semester II

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<td>Air Traffic Control</td>
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<td>AER 280</td>
<td>Instructor Pilot Flight Theory</td>
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<td>AER 281</td>
<td>Flight - CFI</td>
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<td>AER 285</td>
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<td>BUS 270</td>
<td>Professional Development</td>
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<td>or</td>
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<td><strong>Total Hours</strong></td>
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</table>

* Upon approval by academic advisor and division dean, cooperative education experience may be substituted for selected courses. Consult the division dean for details.
Basic Law Enforcement Training Certificate
(C55120)

Career Information

Basic Law Enforcement Training (BLET) is designed to give students essential skills required for entry-level employment as law enforcement officers with state, county, or municipal governments, or with private enterprise. This program utilizes State-commission-mandated topics and methods of instruction. General subjects include, but are not limited to, criminal, juvenile, civil, traffic, and alcoholic beverage laws; investigate, patrol, custody, and court procedures; emergency responses; and ethics and community relations. Graduates receive a curriculum certificate and may be eligible to take the certification examination mandated by the North Carolina Criminal Justice Education and Training Standards Commission and the North Carolina Sheriffs’ Education and Training Standards Commission.

Special Admission Requirements

• Application
• Minimum of twenty (20) years of age
• High school transcript
• Medical physical
• Adult high school diploma or GED
• Background free of criminal offenses
• Sponsored by a law enforcement agency
• Reading placement test
• Interview with school director

Fall Semester I

<table>
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<tr>
<th>CJC</th>
<th>100 Basic Law Enforcement Training</th>
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<th>30</th>
<th>18</th>
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<tr>
<td>Total Hours</td>
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<td>30</td>
<td>18</td>
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</table>

Note: Graduates from this program must have a reading score of 65 or better or must have successfully completed RED 080 - Introduction to College Reading.
Biomedical Equipment Technology (A50100)  
Associate’s Degree Program

Career Information

The Biomedical Equipment Technology curriculum prepares individuals to install, operate, troubleshoot, and repair sophisticated devices and instrumentation used in the health care delivery system. Emphasis is placed on preventive and safety inspections to ensure biomedical equipment meet local and national safety standards. Course work provides a strong foundation in mathematics, physics, electronics, chemistry anatomy, physiology and troubleshooting techniques. People skills are very important, as well as the ability to communicate both in written and oral form. A biomedical equipment technician is a problem solver. Graduates should qualify for employment opportunities in hospitals, clinics, clinical laboratories, shared service organizations and manufacturers’ field service. With an AAS degree and two years experience, individuals should be able to become a certified Biomedical Equipment Technician.

Special Admission Requirements

- Application
- Placement tests
- High school transcript
- Adult high school diploma or GED
- Health form after acceptance
- Current certification in CPR after acceptance

Fall Semester I

<table>
<thead>
<tr>
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<td>Course Code</td>
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<td>----------------------------------</td>
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<tr>
<td>NET 110</td>
<td>Data Comm./Networking</td>
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<td>MAT 121</td>
<td>Algebra/Trigonometry I</td>
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<td>ELC 112</td>
<td>DC/AC Electricity</td>
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<td>ENG 111</td>
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<td>ENG 111A</td>
<td>Expository Writing Lab</td>
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<tr>
<td>ELN 131</td>
<td>Electronic Devices</td>
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<tr>
<td>BMT 120</td>
<td>Biomedical Anatomy &amp; Physiology</td>
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<td>ELN 133</td>
<td>Digital Electronics</td>
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<td>PHY 131</td>
<td>Physics -Mechanics</td>
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<td>Interpersonal Communication</td>
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<tr>
<td>BMT 112</td>
<td>Hospital Safety Standards</td>
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<td>BMT 211</td>
<td>Biomedical Measurements</td>
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<td>BMT 212</td>
<td>BMET Instrumentation I</td>
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<td>BMT 223</td>
<td>Imaging Tec./Laser Fund.</td>
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<td>ELN 232</td>
<td>Introduction to Microprocessors</td>
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<td>BMT 213</td>
<td>BMET Instrumentation II</td>
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<td>BMT 225</td>
<td>Biomed Troubleshooting</td>
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* Upon approval by academic advisor and division dean, cooperative education experience may be substituted for selected courses. Consult the division dean for details.
Career Information

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 and the 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 life-long learning. Graduates are prepared for employment opportunities in governmental agencies, financial institutions, large to small businesses or industry.

<table>
<thead>
<tr>
<th>Semester</th>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
<th>Type</th>
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<td>ACC 120</td>
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<td>4</td>
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MAT 115 Mathematical Models 2 2 3
ECO 151 Survey of Economics or
ECO 251 Principles of Microeconomics or
ECO 252 Principles of Macroeconomics 3 0 3

Semester Total 15 6 18

Spring Semester II
ACC 149 Intro to Accounting Spreadsheets 1 2 2
BUS 153 Human Resource Management 3 0 3
BUS 240 Business Ethics 3 0 3
BUS 260 Business Communication 3 0 3
BUS 270 Professional Development 3 0 3
MKT 220 Advertising and Sales Promotion 3 0 3

Semester Total 16 2 17
Total Hours 66 20 76

* Upon approval by academic advisor and division dean, cooperative education experience may be substituted for selected courses. Consult the division dean for details.

Business Administration - Electronic Commerce
Associate’s Degree Program (A2512I)

Career Information

Electronic Commerce is a concentration under the title of Business Administration. This curriculum is designed to prepare individuals for a career in the internet economy.

Course work includes topics related to electronic business, Internet strategy in business, basic business principles in the world of E-Commerce. Students will be able to demonstrate the ability to identify and analyze such functional issues as planning, technical systems, marketing, security, finance, law, design, implementation, assessment and policy issues at an entry level.

Graduates from this program will have a sound business educational base for life long learning. Graduates are prepared for employment opportunities in government agencies, financial institutions, and small to medium size business or industry.

Fall Semester I
ENG 111 Expository Writing 3 0 3
ENG 111A Expository Writing Lab 0 2 1
BUS 110 Introduction to Business 3 0 3
ACA 111 College Student Success 1 0 1
CIS 111 Basic PC Literacy 1 3 2
CIS 172 Intro to the Internet 2 3 3
OST 131 Keyboarding 1 2 2

Semester Total 11 9 15
### Spring Semester I

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>ENG 114</td>
<td>Prof. Research and Reporting</td>
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<td>ACC 120</td>
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<td>ITN 140</td>
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### Summer Semester I

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<td>or ECO 251</td>
<td>Principles of Microeconomics</td>
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<td>or ECO 252</td>
<td>Principles of Macroeconomics</td>
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<td>ECM 220</td>
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<td>Business Law I</td>
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* Upon approval by academic advisor and division dean, cooperative education experience may be substituted for selected courses. Consult the division dean for details.

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### Business Administration (D25120)

**Diploma Program**

#### Fall Semester I

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**Spring Semester I**

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<td>Principles of Accounting II</td>
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<td>Human Resource Management</td>
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<td>CIS 111</td>
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**Summer Semester I**

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<td>or</td>
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*Upon approval by academic advisor and division dean, cooperative education experience may be substituted for selected courses. Consult the division dean for details.*

**Note:** Minimum reading requirements must be completed for all programs. Graduates from diploma and certificate programs in the technical area must have a reading score of 83 or better or must have successfully completed RED 090 - Improved College Reading.

---

**Business Administration (C25120M)**

**Management Certificate**

**Fall Semester I**

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<th>Course Name</th>
<th>Credits</th>
<th>Hours</th>
<th>Notes</th>
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<td>BUS 115</td>
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**Spring Semester I**

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<th>Course Name</th>
<th>Credits</th>
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<tbody>
<tr>
<td>BUS 153</td>
<td>Human Resource Management</td>
<td>3</td>
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<td>BUS 270</td>
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<td>Interpersonal Communication</td>
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**Total Hours**

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</table>
Note: Minimum reading requirements must be completed for all programs. Graduates from diploma and certificate programs in the technical area must have a reading score of 83 or better or must have successfully completed RED 090 - Improved College Reading.

Business Administration (C25120K)
Marketing Certificate

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<th>Course Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
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<td></td>
</tr>
<tr>
<td>BUS 110</td>
<td>Introduction to Business</td>
<td>3</td>
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<tr>
<td>BUS 115</td>
<td>Business Law I</td>
<td>3</td>
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</tr>
<tr>
<td>MKT 120</td>
<td>Principles of Marketing</td>
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<tr>
<td><strong>Semester Total</strong></td>
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<td><strong>Spring Semester I</strong></td>
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<tr>
<td>BUS 270</td>
<td>Professional Development</td>
<td>3</td>
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<td>COM 120</td>
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<td>MKT 220</td>
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<tr>
<td><strong>Total Hours</strong></td>
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</table>

Note: Minimum reading requirements must be completed for all programs. Graduates from diploma and certificate programs in the technical area must have a reading score of 83 or better or must have successfully completed RED 090 - Improved College Reading.
Cardiovascular Sonography (A45160)
Associate’s Degree Program

Career Information
Cardiovascular Sonography curriculum provides the individual with the knowledge and skills necessary to acquire, process, and evaluate the human heart and vascular structures. A Cardiovascular Sonographer uses high frequency sound waves to produce images of the heart and vascular structures. Course work includes effective communication and patient care skills combined with a knowledge of physics, human anatomy, physiology, and pathology, all of which are essential to obtaining high quality sonographic images. Graduates may be eligible to apply to the American Registry of Diagnostic Medical Sonographers for examinations in physics, cardiovascular physics, vascular physics, adult echocardiography, and vascular technology. Graduates may find employment in hospitals, physician’s offices, mobile services, and educational institutions.

Special Admission Requirements
• Application
• Attend information session
• High school transcript
• Adult high school diploma or GED
• Transcripts of college work
• Placement tests
• Hospital visit arranged by admissions counselor (degree program)
• Interview with program director
• Current Certification in CPR after acceptance (degree program)
• Health form after acceptance (degree program)

Fall Semester I
CVS 163 Echo I 3 2 4
BIO 168 Anatomy and Physiology I 3 3 4
ENG 111 Expository Writing 3 0 3
ENG 111A Expository Writing Lab 0 2 1
CVS 160 CVS Clinical Education I 0 15 5
Semester Total 9 22 17

Spring Semester I
CVS 164 Echo II 3 2 4
SON 111 Sonographic Physics 3 3 4
BIO 169 Anatomy and Physiology II 3 3 4
CVS 161 CVS Clinical Education II 0 24 8
Semester Total 9 32 20

Summer Semester I
PSY 150 General Psychology 3 0 3
CVS 162 CVS Clinical Education III 0 15 5
**Cardiovascular Sonography Certificate (C45160)**

Certificate Program

A certificate will be awarded upon successful completion (2.0 GPA) of a minimum of 14 credit hours from requirements listed below.

<table>
<thead>
<tr>
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<th>Semester Hours</th>
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<tbody>
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<td>CVS 164</td>
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Note: Graduates from this program must have a reading score of 83 or better or must have successfully completed RED 090 - Improved College Reading. This program is designed for health professionals currently practicing.

**Echocardiography Certificate (C45160A)**

Certificate Program

A certificate will be awarded upon successful completion (2.0 GPA) of a minimum of 12 credit hours from the following requirements.

<table>
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<th>Course</th>
<th>Semester Hours</th>
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<tbody>
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<td>CVS 164</td>
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<td>SON 111</td>
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</tbody>
</table>

Note: Graduates from this program must have a reading score of 83 or better or must have successfully completed RED 090 - Improved College Reading. This program is designed for health professionals currently practicing.
Career Information

The Computed Tomography and Magnetic Resonance Imaging Technology curriculum, a specialty for radiographers, prepares the individual to use specialized equipment to visualize cross-sectional anatomical structures and aid physicians in the demonstration of pathologies and disease processes. Individual entering this curriculum must be registered or registry eligible radiologic technologists by the ARRT. Course work prepares the technologist to provide patient care and perform studies utilizing imaging equipment, professional communication, and quality assurance in scheduled and emergency procedures through academic and clinical studies. Graduates may be eligible to sit for the American Registry of Radiologic Technologist Advanced-Level testing in Computed Tomography and/or Magnetic Resonance Imaging examinations. They may find employment in facilities which perform these imaging procedures.

Special Admission Requirements

- Application
- High school transcript
- Adult high school diploma or GED
- Transcripts of college work
- Placement tests
- Interview with program director
- ARRT certification
  (check program requirements)
- Health form after acceptance
<table>
<thead>
<tr>
<th>Semester</th>
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<td>CAT 211</td>
<td>CT Procedures</td>
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<td>MRI Physics &amp; Equipment</td>
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Note: Graduates from this program must have a reading score of 83 or better or must have successfully completed RED 090 - Improved College Reading.

**CT Certificate (C45200C)**

**Certificate Program**

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<td>CAT 211</td>
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<td>CAT 231</td>
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Note: Graduates from this program must have a reading score of 83 or better or must have successfully completed RED 090 - Improved College Reading.

**MRI Certificate (C45200M)**

**Certificate Program**

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Note: Graduates from this program must have a reading score of 83 or better or must have successfully completed RED 090 - Improved College Reading.
Computer Programming (A25130)
Associate's Degree Program

Career Information
The Computer Programming curriculum prepares individuals for employment as computer programmers and related positions through study and applications in computer concepts, logic, programming procedures, languages, generators, operating systems, networking, data management, and business operations. Students will solve business computer problems through programming techniques and procedures, using appropriate languages and software. The primary emphasis of the curriculum is hands-on training in programming and related computer areas that provide the ability to adapt as systems evolve. Graduates should qualify for employment in business, industry, and government organizations as programmers, programmer trainees, programmer/analysts, software developers, computer operators, systems technicians, database specialists, computer specialists, software specialists, or information systems managers.

Fall Semester I

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* Upon approval by academic advisor and division dean, cooperative education experience may be substituted for selected courses. Consult the division dean for details.
Cosmetology (A55140)
Associate’s Degree Program

Career Information
The Cosmetology curriculum is designed to provide competency-based knowledge, scientific/artistic principles, and hands-on fundamentals associated with the cosmetology industry. The curriculum provides a simulated salon environment which enables students to develop manipulative skills. Course work includes instruction in all phases of professional imaging, hair design, chemical processes, skin care, nail care, multicultural practices, business/computer principles, product knowledge, and other selected topics. Graduates should qualify to sit for the State Board of Cosmetic Arts examination. Upon successfully passing the State Board exam, graduates will be issued a license. Employment is available in beauty salons and related businesses.

Special Admission Requirements
• Application
• High school transcript
• Adult high school diploma or GED
• Transcripts of college work
• Reading placement test
• Interview with program coordinator

Fall Semester I
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**Cosmetology (D55140)**

Diploma Program (1500 hours)

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### Fall Semester I

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**Note:** Graduates from this program must have a reading score of 65 or better or must have successfully completed RED 080 - Introduction to College Reading.
Cosmetology Certificate (C55140)
Certificate Program (1200 hours)

**Fall Semester**
- COS 111 Cosmetology Concepts I 4 0 4
- COS 112 Salon I 0 24 8
  
  **Semester Total** 4 24 12

**Spring Semester**
- COS 113 Cosmetology Concepts II 4 0 4
- COS 114 Salon II 0 24 8
  
  **Semester Total** 4 24 12

**Summer Semester**
- COS 115 Cosmetology Concepts III 4 0 4
- COS 116 Salon III 0 12 4
  
  **Semester Total** 4 12 8
  
  **Total Hours** 12 60 32

**Note:** Graduates from this program must have a reading score of 65 or better or must have successfully completed RED 080 - Introduction to College Reading.

Cosmetology Instructor Certificate (C55160)
Certificate Program

**Career Information**
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. A certificate will be awarded upon successful completion (2.0 GPA) of a minimum of 24 credit hours from requirements listed below.

- COS 271 Instructor Concepts I 5 0 5
- COS 272 Instructor Practicum I 0 21 7
- COS 273 Instructor Concepts II 5 0 5
- COS 274 Instructor Practicum II 0 21 7
  
  **Total Hours** 10 42 24

**Note:** Graduates from this program must have a reading score of 65 or better or must have successfully completed RED 080 - Introduction to College Reading.
Manicure Instructor Certificate (C55380)
Certificate Program

Career Information
The Manicuring Instructor curriculum provides a course of study covering the skills needed to teach the theory and practices of manicuring as required by the North Carolina State Board of Cosmetology. Course work includes all phases of manicuring theory laboratory instruction. Graduates should be prepared to take the North Carolina cosmetology State Board Manicuring Instructor Licensing Exam and upon passing be qualified for employment in a cosmetology or manicuring school. A certificate will be awarded upon successful completion (2.0 GPA) of a minimum of 13 credit hours from requirements listed below.

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Total Hours: 13

Note: Graduates from this program must have a reading score of 65 or better or must have successfully completed RED 080 - Introduction to College Reading.

Manicuring/Nail Technology Certificate (C55400)
Certificate Program

Career Information
The Manicuring/Nail Technology curriculum provides competency-based knowledge, scientific/artistic principles, and hands-on fundamentals associated with the nail technology industry. The curriculum provides a simulated salon environment which enables students to develop manipulative skills. Course work includes instruction in all phases of professional nail technology, business/computer principles, product knowledge, and other related topics. Graduates should be prepare 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, in related businesses. A certificate will be awarded upon successful completion (2.0 GPA) of a minimum of 12 credit hours from requirements listed below.

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<td>COS 122</td>
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Total Hours: 12

Note: Graduates from this program must have a reading score of 65 or better or must have successfully completed RED 080 - Introduction to College Reading.
Early Childhood Associate (A55220)
Associate's Degree Program

Career Information
The Early Childhood Associate curriculum prepares individuals to work with children from infancy through middle childhood in diverse learning environments. Students will combine learned theories with practice in actual settings with young children under the supervision of qualified teachers. Course work includes child growth and development; physical/nutritional needs of children; care and guidance of children; and communication skills with parents and children. Students will foster the cognitive/language, physical/motor, social/emotional, and creative development of young children. Graduates are prepared to plan and implement developmentally appropriate programs in early childhood settings. Employment opportunities include child development and child care programs, preschools, public and private schools, recreational centers, Head Start Programs, and school age programs.

Professional Fundamentals Option (A55220F)
Associate's Degree Program

This program is designed to meet the needs of most students desiring to work within the field of early childhood. It will prepare students to function within a variety of existing settings and is recommended for all, except those wishing to work in a self-supporting role.

Fall Semester I

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**Spring Semester I**

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<th>Credits</th>
<th>Hours</th>
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<td>10</td>
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<td>COE 115</td>
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<tr>
<td>EDU 153</td>
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<tr>
<td>ENG 111</td>
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**Summer Semester I**

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<td>Exploration Activities</td>
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<td>Child Guidance</td>
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<td>EDU 151</td>
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<tr>
<td>SOC 210</td>
<td>Introduction to Sociology</td>
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<td>MAT 115</td>
<td>Mathematical Models</td>
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<tr>
<td>BIO 140</td>
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**Note:** Graduates from this program must have a reading score of 83 or better or must have successfully completed RED 090 - Improved College Reading.

**Note:** Minimum math requirement is MAT 070.
Professional Business Option (A55220B)
Associate's Degree Program

This program is structured for those students wishing to pursue early childhood as a business. It is designed to provide courses specific to increasing knowledge and skills in business management, accounting, and computer usage.

### Fall Semester I

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
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<th>Units</th>
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<td>2</td>
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<td>EDU 144</td>
<td>Child Development I</td>
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### Spring Semester I

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<td>COE 111</td>
<td>Co-op Work Experience I</td>
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<td>COE 115</td>
<td>Work Experience Seminar I</td>
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<td>Child Development II</td>
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<td>Exploration Activities</td>
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### Spring Semester II

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<td>Work Experience Seminar II</td>
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<tr>
<td>MAT 115</td>
<td>Mathematical Models</td>
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<td>or</td>
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<td>BIO 140A</td>
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<td>Curriculum Planning</td>
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<td>BUS 230</td>
<td>Small Business Management</td>
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**Early Childhood Associate (D55220)**

**Diploma Program**

**Fall Semester I**
- ACA 111 College Student Success | 1 | 0 | 1 |
- EDU 119 Early Childhood Ed | 3 | 2 | 4 |
- EDU 144 Child Development I | 3 | 0 | 3 |
- EDU 146 Child Guidance | 3 | 0 | 3 |
- EDU 151 Creative Activities | 3 | 0 | 3 |
- EDU 288 Adv. Issues/Early Childhood Ed. | 2 | 0 | 2 |
- EDU 221 Children With Special Needs | 3 | 0 | 3 |
- EDU 261 Early Childhood Administration I | 2 | 0 | 2 |

**Semester Total** | 21 | 2 | 21 |

**Spring Semester I**
- COE 111 Co-op Work Experience I | 0 | 10 | 1 |
- COE 115 Work Experience Seminar I | 1 | 0 | 1 |
- EDU 145 Child Development II | 3 | 0 | 3 |
- EDU 153 Health, Safety, and Nutrition | 3 | 0 | 3 |
- ENG 111 Expository Writing | 3 | 0 | 3 |
- ENG 111A Expository Writing Lab | 0 | 2 | 1 |
- MAT 115 Mathematical Models | 2 | 2 | 3 |
- or BIO 140 Environmental Biology | 3 | 0 | 3 |
- BIO 140A Environmental Biology Lab | 0 | 3 | 1 |
- EDU 282 Early Childhood Literature | 3 | 0 | 3 |

**Semester Total** | 15/16 | 14/15 | 18/19 |

**Summer Semester I**
- COM 120 Interpersonal Communication | 3 | 0 | 3 |
- EDU 131 Child, Family and Community | 3 | 0 | 3 |
- EDU 251 Exploration Activities | | | |
- or EDU 262 Early Childhood Administration II | 3 | 0 | 3 |

**Semester Total** | 9 | 0 | 9 |

**Total Hours** | 45/46 | 14/15/17 | 48/49 |

**Note:** Graduates from this program must have a reading score of 83 or better or must have successfully completed RED 090 - Improved College Reading.

**Note:** Minimum math requirement is MAT 070.
Note: Graduates from this program must have a reading score of 83 or better or must have successfully completed RED 090 - Improved College Reading.

### Child Care Operator (C55220CC)

**Certificate Program**

#### Fall Semester I

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**Semester Total**: 11 2 12

#### Spring Semester I

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**Semester Total**: 4 10 5

**Total Hours**: 15 12 17

Note: Graduates from this program must have a reading score of 83 or better or must have successfully completed RED 090 - Improved College Reading.

### School-Age Provider (C55220SA)

**Certificate Program**

#### Fall Semester I

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<td>EDU 235</td>
<td>School Age Dev. &amp; Program</td>
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**Semester Total**: 8 0 8

#### Spring Semester

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<td>EDU 131</td>
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<td>EDU 145</td>
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**Semester Total**: 7 10 8

**Total Hours**: 15 10 16

Note: Graduates from this program must have a reading score or 83 or better or must have successfully completed RED 090 - Improved College Reading.
Teacher/Caregiver (C55220TC)
Certificate Program

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<td>EDU 144</td>
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<td>4</td>
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<tr>
<td>or</td>
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<tr>
<td>EDU 145</td>
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<td>EDU 146</td>
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Note: Graduates from this program must have a reading score of 83 or better or must have successfully completed RED 090 - Improved College Reading.
Electrical/Electronics Technology (D35220)
Diploma Program

Career Information
The Electrical/Electronics Technology curriculum is designed to provide training for persons interested in the installation and maintenance of electrical/electronic systems found in residential, commercial and industrial facilities. Training, most of which is hands-on, will include such topics as DC/AC theory, basic wiring practices, digital electronics, programmable logic controllers, industrial motor controls, the National Electric Code, and other subjects as local needs require. Graduates should qualify for a variety of jobs in the electrical/electronics field as an on-the-job trainee or apprentice, assisting in the layout, installation, and maintenance of electrical/electronic systems.

<table>
<thead>
<tr>
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<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
<th>Hours</th>
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<tbody>
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<td>ELC 113</td>
<td>Basic Wiring I</td>
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<td>Diagrams &amp; Schematics</td>
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<td></td>
<td>ELC 114</td>
<td>Basic Wiring II</td>
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<tr>
<td></td>
<td>ELC 128</td>
<td>Introduction to PLC</td>
<td>2</td>
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<tr>
<td></td>
<td>ELN 131</td>
<td>Electronic Devices</td>
<td>3</td>
<td>3</td>
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<tr>
<td></td>
<td>ELN 133</td>
<td>Digital Electronics</td>
<td>3</td>
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<td><strong>Semester Total</strong></td>
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<td><strong>17</strong></td>
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<td>COE 111</td>
<td>Co-op Work Experience I</td>
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<tr>
<td></td>
<td>ELC 117</td>
<td>Motors &amp; Controllers</td>
<td>2</td>
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<td></td>
<td>HYD 110</td>
<td>Hydraulics/Pneumatics I</td>
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Note: Graduates from this program must have a reading score of 65 or better or must have successfully completed RED 080 - Introduction to College Reading.

Electrical/Electronics Technology (C35220)
Certificate Program

<table>
<thead>
<tr>
<th>Semester</th>
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<th>Course Name</th>
<th>Credits</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>ELC 112</td>
<td>DC/AC Electricity</td>
<td>3</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>ELC 113</td>
<td>Basic Wiring I</td>
<td>2</td>
<td>6</td>
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</tbody>
</table>
Electronics Engineering Technology (A40200)
Associate's Degree Program

Career Information
The Electronic Engineering Technology curriculum prepares individuals to become technicians who design, build, install, test, troubleshoot, repair, and modify developmental and production electronic components, equipment, and systems such as industrial/computer controls, manufacturing systems, communication systems, and power electronic systems. A broad-based core of courses, including basic electricity, solid-state fundamental, digital concepts, and microprocessors, ensures the student will develop the skills necessary to perform entry-level tasks. Emphasis is placed on developing the student’s ability to analyze and troubleshoot electronic systems. Graduates should qualify for employment as engineering assistants or electronic technicians with job titles such as electronics engineering technician, field service technician, maintenance technician, electronic tester, electronic systems integrator, bench technician, and production control technician.

Fall Semester I

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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<tbody>
<tr>
<td>ACA 111</td>
<td>College Student Success 1 0 1</td>
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<tr>
<td>CIS 110</td>
<td>Introduction to Computers 2 2 3</td>
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<tr>
<td>ELC 118</td>
<td>National Electric Code 1 2 2</td>
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<tr>
<td>ELC 131</td>
<td>DC/AC Circuit Analysis 4 3 5</td>
</tr>
<tr>
<td>ENG 111</td>
<td>Expository Writing 3 0 3</td>
</tr>
<tr>
<td>ENG 111A</td>
<td>Expository Writing Lab 0 2 1</td>
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<tr>
<td>MAT 171</td>
<td>Precalculus Algebra 3 0 3</td>
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Spring Semester I

<table>
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<tr>
<th>Course</th>
<th>Credits</th>
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<tbody>
<tr>
<td>ELC 131</td>
<td>Electrical Devices 3 3 4</td>
</tr>
<tr>
<td>ELN 133</td>
<td>Digital Electronics 3 3 4</td>
</tr>
<tr>
<td>ENG 114</td>
<td>Professional Research &amp; Report or Literature Based Research 3 0 3</td>
</tr>
<tr>
<td>MAT 172</td>
<td>Precalculus Trigonometry 3 0 3</td>
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<td>MAT 172A</td>
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Note: Graduates from this program must have a reading score of 65 or better or must have successfully completed RED 080 - Introduction to College Reading.
### Summer Semester I

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<thead>
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<td>ELN 231</td>
<td>Industrial Controls</td>
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<td>ELN 275</td>
<td>Troubleshooting</td>
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### Fall Semester II

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<tr>
<td>ELN 132</td>
<td>Linear IC Application</td>
<td>3</td>
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<td>ELN 232</td>
<td>Introduction to Microprocessors</td>
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<td>PHY 131</td>
<td>Physics - Mechanics</td>
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<td>NET 110</td>
<td>Data Com/Networking</td>
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### Spring Semester II

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<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>COM 120</td>
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<td>ELC 128</td>
<td>Introduction to PLC</td>
<td>2</td>
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<tr>
<td>ELN 233</td>
<td>Microprocessor Systems</td>
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<td></td>
<td>Social Science Elective</td>
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* Upon approval by academic advisor and division dean, cooperative education experience may be substituted for selected courses. Consult the division dean for details.
Emergency Preparedness Technology (A55420)

Associate’s Degree Program

Career Information
The Emergency Preparedness Technology 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 within their current organizations.

<table>
<thead>
<tr>
<th>Fall Semester I</th>
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<tbody>
<tr>
<td>FIP 136</td>
<td>Inspections and Codes 3 0 3</td>
</tr>
<tr>
<td>FIP 164</td>
<td>OSHA Standards 3 0 3</td>
</tr>
<tr>
<td>FIP 128</td>
<td>Detection and Investigation 3 0 3</td>
</tr>
<tr>
<td>FIP 152</td>
<td>Fire Protection Law 3 0 3</td>
</tr>
<tr>
<td>ENG 111</td>
<td>Expository Writing 3 0 3</td>
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<td>Expository Writing Lab 0 2 1</td>
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<tr>
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<tbody>
<tr>
<td>ENG 113</td>
<td>Literature-Based Research</td>
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<tr>
<td>Course Code</td>
<td>Course Title</td>
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<tr>
<td>-------------</td>
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<tr>
<td>ENG 114</td>
<td>Prof. Research and Reporting</td>
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<tr>
<td>EPT 150</td>
<td>EMS Incident Management</td>
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<tr>
<td>FIP 236</td>
<td>Emergency Management</td>
</tr>
<tr>
<td>FIP 256</td>
<td>Municipal Public Relations</td>
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<tr>
<td>CJC 131</td>
<td>Criminal Law</td>
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**Summer Semester I**

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<th>Course Title</th>
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<th>Type</th>
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<tbody>
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<td>Introduction to Computers</td>
<td>2</td>
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<td>EMS 235</td>
<td>EMS Management</td>
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**Fall Semester II**

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<td>FIP 276</td>
<td>Managing Fire Services</td>
<td>3</td>
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<tr>
<td>EPT 220</td>
<td>Terrorism and Emergency Mgm't</td>
<td>3</td>
<td>0</td>
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<tr>
<td>MAT 115</td>
<td>Mathematical Models</td>
<td>2</td>
<td>2</td>
<td>3</td>
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**Spring Semester II**

<table>
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<tbody>
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<td>FIP 240</td>
<td>Fire Service Supervision</td>
<td>3</td>
<td>0</td>
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<tr>
<td>EPT 210</td>
<td>Disaster Resp.Ops. and Mgm't</td>
<td>3</td>
<td>2</td>
<td>4</td>
<td></td>
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<tr>
<td>FIP 228</td>
<td>Local Gov't Finance</td>
<td>3</td>
<td>0</td>
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<tr>
<td>POL 130</td>
<td>State and Local Government</td>
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**Total Hours**

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**EPT Fire Service Concentration (D55420)**

**Diploma Program**

**Fall Semester I**

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<th>Course Title</th>
<th>Credits</th>
<th>Type</th>
<th>Credits</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>FIP 136</td>
<td>Inspections and Codes</td>
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<tr>
<td>FIP 164</td>
<td>OSHA Standards</td>
<td>3</td>
<td>0</td>
<td>3</td>
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</tr>
<tr>
<td>FIP 152</td>
<td>Fire Protection Law</td>
<td>3</td>
<td>0</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>FIP 128</td>
<td>Detection &amp; Investigation</td>
<td>3</td>
<td>0</td>
<td>3</td>
<td></td>
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<td>Semester Total</td>
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**Spring Semester I**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
<th>Type</th>
<th>Credits</th>
<th>Total</th>
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<td>FIP 240</td>
<td>Fire Service Supervision</td>
<td>3</td>
<td>0</td>
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<tr>
<td>FIP 228</td>
<td>Local Government Finance</td>
<td>3</td>
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<tr>
<td>ENG 111</td>
<td>Expository Writing</td>
<td>3</td>
<td>0</td>
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<td>ENG 111A</td>
<td>Expository Writing Lab</td>
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<td>1</td>
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<td>EPT 150</td>
<td>EMS Incident Management</td>
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<td>2</td>
<td>3</td>
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<tr>
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<td>14</td>
<td>6</td>
<td>16</td>
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**Summer Semester I**

| CIS 110 | Introduction to Computers | 2 | 2 | 3 |
| COM 120 | Interpersonal Communication | 3 | 0 | 3 |
| EPT 120 | Sociology of Disaster | 2 | 0 | 2 |
| Semester Total | | 7 | 2 | 8 |
| Total Hours | | 33 | 6 | 36 |

**Note:** Minimum reading requirements must be completed for all programs. Graduates from diploma and certificate programs in the technical area must have a reading score of 83 or better or must have successfully completed RED 090 - Improved College Reading.

**EPT Emergency Management Concentration (C55420)**

**Certificate Program**

**Fall Semester I**

| FIP 236 | Emergency Management | 3 | 0 | 3 |
| EPT 120 | Sociology of Disaster | 2 | 0 | 2 |
| EPT 275 | Emergency Ops Center Mgm’t | 3 | 2 | 4 |
| EPT 210 | Disaster Resp. Ops. & Mgm’t | 3 | 2 | 4 |
| EPT 220 | Terrorism & Emergency Mgm’t | 3 | 0 | 3 |
| **Total Hours** | | **14** | **4** | **16** |
General Occupational Technology (D55280)
Diploma Program

Career Information
The General Occupational Technology curriculum provides individuals with an opportunity to upgrade their skills and to earn an diploma by taking courses suited for their occupational interests and/or needs. The curriculum content will be individualized for student according to their occupational interests and needs. A program of study for each student will be selected from associate degree level courses offered by the college. Graduates will become more effective workers, be better qualified for advancements within their field of employment, and become qualified for a wide range of entry level employment opportunities. A diploma will be awarded upon successful completion of 37 hours from the requirements listed below.

General Education Hours 7
Other Major/Required Hours 30
Total Hours 37

General Education Courses
Must Select:(7 hours)
ENG 111 Expository Writing 3 0 3
ENG 111A Expository Writing Lab 0 2 1
COM 120 Interpersonal Communication or
COM 231 Public Speaking 3 0 3

Other Major/Required Courses (choose 30 hrs.)
BIO 163 Basic Anatomy and Physiology 4 2 5
BIO 168 Anatomy and Physiology I 3 3 4
BIO 169 Anatomy and Physiology II 3 3 4
BIO 170 Introductory Microbiology 3 3 4
CHM 151 General Chemistry I 3 3 4
CIS 111 Basic PC Literacy 1 2 2
or
CIS 113 Computer Basics 0 2 1
ENG 113 Literature-Based Research 3 0 3
ENG 114 Professional Research & Report or
Humanities/Fine Arts Elective 3 0 3
MAT 151 Statistics 3 0 3
MAT 151A Statistics Lab 0 2 1
MED 121 Medical Terminology I 3 0 3
PHY 110 Conceptual Physics 3 0 3
PSY 150 General Psychology 3 0 3
PSY 237 Social Psychology 3 0 3
PSY 241 Developmental Psychology 3 0 3
PSY 281 Abnormal Psychology 3 0 3
Refer to specific AAS program in Allied Health for the appropriate Major and /or Required courses.

**Note:** Graduates from this program must have a reading score of 83 or better or must have successfully completed RED 090 - Improved College Reading.
Information Systems (A25260)
Associate's Degree Program

Career Information
The Information Systems curriculum is designed to prepare graduates for employment with organizations that use computers to process, manage, and communicate information. This is a flexible program, designed to meet community information systems needs. Course work includes computer systems terminology and operations, logic, operating systems, database, data communications/networking, and related business topics. Studies will provide experience for students to implement, support, and customize industry-standard information systems. Graduates should qualify for a wide variety of computer-related, entry-level positions that provide opportunities for advancement with increasing experience and ongoing training. Duties may include systems maintenance and troubleshooting, support and training, and business applications design and implementation.

Fall Semester I

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACA 111</td>
<td>College Student Success</td>
</tr>
<tr>
<td>CIS 110</td>
<td>Introduction to Computers</td>
</tr>
<tr>
<td>CIS 115</td>
<td>Intro to Programming and Logic</td>
</tr>
<tr>
<td>ENG 111</td>
<td>Expository Writing</td>
</tr>
<tr>
<td>ENG 111A</td>
<td>Expository Writing Lab</td>
</tr>
<tr>
<td>NET 110</td>
<td>Data Comm/Networking</td>
</tr>
<tr>
<td>COM 120</td>
<td>Interpersonal Communication</td>
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Spring Semester I

<table>
<thead>
<tr>
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<th>Credits</th>
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<tbody>
<tr>
<td>CIS 120</td>
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<tr>
<td>CIS 130</td>
<td>Survey of Operating Systems</td>
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<td>Program</td>
<td>Course Code</td>
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<tr>
<td>---------</td>
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</tr>
<tr>
<td>CIS 152</td>
<td>Database Concepts &amp; Applications</td>
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<td>ENG 113</td>
<td>Literature-Based Research</td>
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<td>ENG 114</td>
<td>Professional Research &amp; Report</td>
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<td>ITN 140</td>
<td>Web Development Tools</td>
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<td>ITN 140</td>
<td>Social Science Elective</td>
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**Summer Semester I**

<table>
<thead>
<tr>
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<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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<tr>
<td>MAT 115</td>
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**Fall Semester II**

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<td>CIS 135</td>
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<td>CIS 286</td>
<td>Systems Analysis and Design</td>
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**Spring Semester II**

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<th>Program</th>
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<th>Course Title</th>
<th>Credits</th>
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<tr>
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<td>Principles of Accounting I</td>
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<tr>
<td>CSC 239</td>
<td>Advanced Visual BASIC</td>
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<tr>
<td>CIS 235</td>
<td>Adv. PC Diagnostics/Config</td>
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<td>CIS 217</td>
<td>Computer Training and Support</td>
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<td>CIS 288</td>
<td>System Project</td>
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* Upon approval by academic advisor and division dean, cooperative education experience may be substituted for selected courses. Consult the division dean for details.
### Information Systems (D25260)
#### Diploma Program

#### Fall Semester I
- **ACA 111** College Student Success  
  1 0 1  
- **CIS 110** Introduction to Computers  
  2 2 3  
- **CIS 115** Intro to Programming and Logic  
  2 2 3  
- **ENG 111** Expository Writing  
  3 0 3  
- **ENG 111A** Expository Writing Lab  
  0 2 1  
- **NET 110** Data Communications/Networking  
  2 2 3  
- **CIS 115** PC Diagnostics/Configurations  
  2 2 3  
- **CSC 139** Visual BASIC Programming  
  2 3 3  
- **Semester Total** 14 13 20

#### Spring Semester I
- **CIS 120** Spreadsheet I  
  2 2 3  
- **CIS 130** Survey of Operating Systems  
  2 3 3  
- **CIS 152** Database Concepts & Applications  
  2 2 3  
- **ITN 140** Web Development Tools  
  2 2 3  
- **CIS 217** Computer Training and Support  
  2 2 3  
- **Semester Total** 10 11 15

#### Summer Semester I
- **MAT 115** Mathematical Models  
  2 2 3  
- **** Humanities/Fine Arts Elective  
  3 0 3  
- **Semester Total** 5 2 6  
- **Total Hours** 29 26 41

* Upon approval by academic advisor and division dean, cooperative education experience may be substituted for selected courses. Consult the division dean for details.

**Note:** Graduates from this program must have a reading score of 83 or better or must have successfully completed RED 090 - Improved College Reading.

### Information Systems - Hardware Support Specialist
#### (C25260H)
#### Certificate Program

#### Fall Semester I
- **CIS 110** Introduction to Computers  
  2 2 3  
- **NET 110** Data Communications/Network  
  2 2 3  
- **CIS 135** PC Diagnostics/Configurations  
  2 2 3  
- **Semester Total** 6 6 9

#### Spring Semester I
- **CIS 130** Survey of Operating Systems  
  2 3 3
CIS 235 Adv. PC Diagnostics/Config 2 2 3
CIS 217 Computer Training and Support 2 2 3
Semester Total 6 7 9
Total Hours 12 13 18

Note: Graduates from this program must have a reading score of 83 or better or must have successfully completed RED 090 - Improved College Reading.

Information Systems - Software Support Specialist (C25260S)
Certificate Program

Fall Semester I
CIS 110 Introduction to Computers 2 2 3
CIS 125 CORE Integrated Software 2 2 3
Semester Total 4 4 6

Spring Semester I
CIS 120 Spreadsheet I 2 2 3
CIS 130 Survey of Operating Systems 2 3 3
CIS 152 Database Concepts/Applications 2 2 3
CIS 217 Computer Training and Support 2 2 3
Semester Total 8 9 12
Total Hours 12 13 18

Note: Graduates from this program must have a reading score of 83 or better or must have successfully completed RED 090 - Improved College Reading.

Information Systems - WebSite Developer (C25260W)
Certificate Program

Fall Semester I
CIS 110 Introduction to Computers 2 2 3
CIS 115 Intro to Programming/Logic 2 2 3
Semester Total 4 4 6

Spring Semester I
ITN 140 Web Development Tools 2 2 3
CIS 152 Database Concepts/Applications 2 2 3
Semester Total 4 4 6
Fall Semester II
CSC 139 Visual BASIC Programming 2 3 3
ITN 160 Principles of Web Design 2 2 3
Semester Total 4 5 6
Total Semester Hours 12 13 18

Note: Graduates from this program must have a reading score of 83 or better or must have successfully completed RED 090 - Improved College Reading.

Information Systems
(Network Administration & Support) (A2526D)
Associate's Degree Program

Career Information
Network Administration and Support is a concentration under the curriculum title of Information Systems. This curriculum prepares students to install and support networks and develops strong analytical skills and extensive computer knowledge. Course work includes extensive hands-on experience with networks. Classes cover media types, topologies, and protocols with installation and support of hardware and software, troubleshooting network and computer problems, and administrative responsibilities. Graduates should qualify for positions such as: LAN/PC administrator, microcomputer support consultant, and information systems specialist. Graduates should be prepared to sit for certification exams which can result in industry-recognized credentials.

Fall Semester I
ACA 111 College Student Success 1 0 1
CIS 110 Introduction to Computers 2 2 3
CIS 115 Intro to Programming and Logic 2 2 3
ENG 111 Expository Writing 3 0 3
ENG 111A Expository Writing Lab 0 2 1
NET 110 Data Communication/Networking 2 2 3
NET 125 Routing and Switching I 1 4 3
NET 126 Routing and Switching II 1 4 3
Semester Total 12 16 20

Spring Semester I
CIS 130 Survey of Operating Systems 2 3 3
ENG 113 Literature-Based Research 3 0 3
or
ENG 114 Professional Research & Report
NET 225 Advanced Router & Switching I 1 4 3
NET 226 Advanced Router & Switching II 1 4 3
Semester Total 7 11 12
### Summer Semester I

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<td>or ECO 251</td>
<td>Principles of Microeconomics</td>
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<td>or ECO 252</td>
<td>Principles of Macroeconomics</td>
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<td>CIS 175</td>
<td>Network Management I</td>
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<td>CIS 174</td>
<td>Network Systems Manager I</td>
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<tr>
<td>COM 120</td>
<td>Interpersonal Communication</td>
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</tr>
<tr>
<td>CIS 135</td>
<td>PC Diagnostics/Configuration</td>
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<tr>
<td>CIS 152</td>
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<td>Network Systems Manager II</td>
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<td>CIS 275</td>
<td>Network Management II</td>
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**Total Semester Hours:** 47 45 69

* Upon approval by academic advisor and division dean, cooperative education experience may be substituted for selected courses. Consult the division dean for details.

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### Information Systems

**Network Administration and Support**

**Cisco CCNA Preparation Certificate (C2526DC)**

#### Fall Semester I

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<tr>
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#### Spring Semester I

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<th>Credits</th>
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<tbody>
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<td>NET 225</td>
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<td>NET 226</td>
<td>Advanced Router/Switching II</td>
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**Total Semester Hours:** 4 16 12

*Note: Graduates from this program must have a reading score of 83 or better or must have successfully completed RED 090 - Improved College Reading.*
Internet Technologies (A25290)

Associate’s Degree Program

Career Information
The Internet Technologies curriculum is designed to prepare graduates for employment with organizations that use computers to disseminate information via the Internet internally, externally, and/or globally. The curriculum will prepare students to create and implement these services. Course work includes computer and internet terminology and operations, logic operating systems, database and data communications/networking, and related topics. Studies will provide opportunities for students to implement, support, and customize industry-standard internet technologies. Graduates should qualify for career opportunities as webmasters, internet and intranet administrators, Internet applications specialists, internet programmers and internet technicians. Government institutions, industries and other organizations employ individuals who possess the skills taught in this curriculum.

Fall Semester I

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<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
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<td>NET 110</td>
<td>Data Communication/Networking</td>
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<tr>
<td>ENG 111</td>
<td>Expository Writing</td>
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<td>ENG 111A</td>
<td>Expository Writing Lab</td>
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<td>CIS 110</td>
<td>Introduction to Computers</td>
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<tr>
<td>CIS 115</td>
<td>Intro to Programming/Logic</td>
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| Semester Total | 12   | 11  | 17  |

Spring Semester I

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<td>Literature-Based Research</td>
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<td></td>
<td><strong>Semester Total</strong></td>
<td><strong>13 11 18</strong></td>
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</tbody>
</table>
| *Upon approval by academic advisor and division dean, cooperative education experience may be substituted for selected courses. Consult the division dean for details.*
Landscape Gardening (A15260)
Associate's Degree Program

Career Information
The Landscape Gardening curriculum emphasizes intensive, practical, hands-on training in applied horticulture to reinforce classroom lecture on theory and technique. Course work includes plan propagation, greenhouse and nursery plant culture, turf management, plant identification, arboriculture, diseases and pests of plants, and landscape planning, maintenance, and construction. Graduates will be prepared for employment opportunities in applied horticulture related to landscape development and maintenance for residential and commercial operations. Graduates should be prepared to take the North Carolina Pesticide Applicator’s Examination and the North Carolina Certified Plant Professional Examination.

Fall Semester I

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<td>LSG 111</td>
<td>Basic Landscape Techniques</td>
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<td>Algebra/Trigonometry I</td>
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Spring Semester I

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<td>HOR 114</td>
<td>Landscape Construction</td>
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<td>HOR 134</td>
<td>Greenhouse Operations</td>
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<td>Plant Materials I</td>
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<td>HOR 162</td>
<td>Applied Plant Science</td>
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**Summer Semester I**

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<td>HOR 112</td>
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<td>HOR 164</td>
<td>Horticulture Pest Management</td>
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<td>Arboriculture Practices</td>
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<td>Plant Materials II</td>
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**Fall Semester II**

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<td>LSG Co-op Work Experience III</td>
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<td>COM 120</td>
<td>Interpersonal Communication</td>
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<td>HOR 213</td>
<td>Landscape Design II</td>
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<td>LSG 231</td>
<td>Landscape Supervision</td>
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Students must take a minimum of 3 credit hours from the following list of electives:

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<td>Adv. Plant Materials</td>
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<td>LSG 232</td>
<td>Garden Management</td>
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<td>HOR 215</td>
<td>Landscape Irrigation</td>
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<td>HOR 168</td>
<td>Plant Propagation</td>
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<td><strong>20/21</strong></td>
<td><strong>16/17</strong></td>
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**Spring Semester II**

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**Total Hours**

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<td>102/103</td>
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**Notes:** Graduates from this program must have a reading score of 83 or better or must have successfully completed RED 090 - Improved College Reading.

**Landscape Gardening Diploma (D15260)**

**Fall Semester I**

<table>
<thead>
<tr>
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<tr>
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<td>Basic Landscape Techniques</td>
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<td>0</td>
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<td>LSG 121</td>
<td>Fall Gardening Lab</td>
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<td>6</td>
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<td>ENG 111</td>
<td>Expository Writing</td>
<td>3</td>
<td>0</td>
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<td>2</td>
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<td>MAT 121</td>
<td>Algebra/Trigonometry I</td>
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<table>
<thead>
<tr>
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<th>Units</th>
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<tbody>
<tr>
<td>HOR 160</td>
<td>2</td>
</tr>
<tr>
<td>HOR 114</td>
<td>2</td>
</tr>
<tr>
<td>LSG 122</td>
<td>0</td>
</tr>
<tr>
<td>TRF 110</td>
<td>3</td>
</tr>
<tr>
<td>HOR 162</td>
<td>2</td>
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### Summer Semester I

<table>
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<td>LSG 232</td>
<td>1</td>
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<td>HOR 164</td>
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<tr>
<td>HOR 112</td>
<td>2</td>
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<tr>
<td>HOR 257</td>
<td>1</td>
</tr>
<tr>
<td>LSG 123</td>
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**Notes:** Graduates from this program must have a reading score of 83 or better or must have successfully completed RED 090 - Improved College Reading.

### Landscape Gardening Certificate—General (C15260G)

<table>
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<tr>
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<tr>
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<td>2</td>
</tr>
<tr>
<td>LSG 111</td>
<td>2</td>
</tr>
<tr>
<td>HOR 114</td>
<td>2</td>
</tr>
<tr>
<td>LSG 232</td>
<td>1</td>
</tr>
<tr>
<td>HOR 164</td>
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**Notes:** Graduates from this program must have a reading score of 83 or better or must have successfully completed RED 090 - Improved College Reading.

### Landscape Gardening Certificate—Production (C15260P)

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<tbody>
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<td>2</td>
</tr>
<tr>
<td>HOR 134</td>
<td>2</td>
</tr>
<tr>
<td>HOR 160</td>
<td>2</td>
</tr>
<tr>
<td>HOR 168</td>
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122
Landscape Gardening Certificate—Installation and Maintenance (C15260I)

<table>
<thead>
<tr>
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<th>Course Title</th>
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<tr>
<td>HOR 164</td>
<td>Horticulture Pest Management</td>
<td>2</td>
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<tr>
<td>HOR 260</td>
<td>Plant Materials II</td>
<td>2</td>
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<td>HOR 215</td>
<td>Landscape Irrigation</td>
<td>2</td>
</tr>
<tr>
<td>HOR 112</td>
<td>Landscape Design I</td>
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<tr>
<td></td>
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</table>

Total Hours: 8, 9, 12
Career Information

Drafting and Design is a concentration under the curriculum title of Mechanical Engineering Technology. This curriculum prepares graduates to draft and/or design machine parts, mechanisms, and mechanical systems. Computer-aided drafting (CAD) will be emphasized as the primary method of producing drawings/documentation. Course work includes manual and commuter-aided drafting equipment, materials, statistics, manufacturing methods and processes, mathematics, physics, and written oral communication. Students should acquire skills such as thinking and planning with the emphasis on drafting and design skills. Graduates of this curriculum will qualify to work in many fields of drafting. Drafting and design technicians are employed in manufacturing, research and development, engineering and service firms, government agencies, and related specialists.

Fall Semester I

<table>
<thead>
<tr>
<th>Course</th>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
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<tr>
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<td>111</td>
<td>College Student Success</td>
<td>1</td>
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<tr>
<td>CIS</td>
<td>113</td>
<td>Computer Basics</td>
<td>0</td>
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<tr>
<td>DFT</td>
<td>111</td>
<td>Technical Drafting I</td>
<td>1</td>
</tr>
<tr>
<td>DFT</td>
<td>111A</td>
<td>Technical Drafting I Lab</td>
<td>0</td>
</tr>
<tr>
<td>DFT</td>
<td>151</td>
<td>CAD I</td>
<td>2</td>
</tr>
<tr>
<td>ENG</td>
<td>111</td>
<td>Expository Writing</td>
<td>3</td>
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<tr>
<td>ENG</td>
<td>111A</td>
<td>Expository Writing Lab</td>
<td>0</td>
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<tr>
<td>MEC</td>
<td>111</td>
<td>Machine Processes I</td>
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Spring Semester I

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<th>Credits</th>
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<tbody>
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<td>Design Drafting I</td>
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<td>DFT</td>
<td>112A</td>
<td>Technical Drafting II Lab</td>
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<tr>
<td>DFT</td>
<td>152</td>
<td>CAD II</td>
<td>2</td>
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<tr>
<td>MEC</td>
<td>172</td>
<td>Introduction to Metallurgy</td>
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Summer Semester I

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<th>Credits</th>
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<tbody>
<tr>
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<td>113</td>
<td>Literature-Based Research</td>
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<tr>
<td>or ENG</td>
<td>114</td>
<td>Professional Research &amp; Report</td>
<td></td>
</tr>
<tr>
<td>MAT</td>
<td>171</td>
<td>Precalculus Algebra</td>
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<tr>
<td>MAT</td>
<td>171A</td>
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<td></td>
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124
**Fall Semester II**

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<td>COM 120</td>
<td>Interpersonal Communication</td>
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<td>Design Drafting II</td>
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<td>DFT 153</td>
<td>CAD III</td>
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<td>Precalculus Trigonometry</td>
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<td>PHY 131</td>
<td>Physics - Mechanics</td>
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**Spring Semester II**

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<th>Code</th>
<th>Hours</th>
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<td>COE 111</td>
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<td>DDF 213</td>
<td>Design Drafting III</td>
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* Upon approval by academic advisor and division dean, cooperative education experience may be substituted for selected courses. Consult the division dean for details.

**Mechanical Engineering Technology (C4032A)**

**Certificate Program**

**Fall Semester I**

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<td>Technical Drafting I Lab</td>
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<td>2 3 3</td>
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**Spring Semester I**

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<td>1 3 2</td>
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<td>DFT 112A</td>
<td>Technical Drafting II Lab</td>
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</tr>
<tr>
<td>DFT 152</td>
<td>CAD II</td>
<td>2 3 3</td>
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<td>3 9 6</td>
</tr>
<tr>
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**Note:** Minimum reading requirements must be completed for all programs. Graduates from diploma and certificate programs in the technical area must have a reading score of 83 or better or must have successfully completed RED 090 - Improved College Reading.
Medical Office Administration (A25310)
Associate’s Degree Program

Career Information
This curriculum prepares individuals for entry-level positions in medical and allied health facilities. Jobs include transcriptionist, secretary, hospital unit secretary, records clerk, insurance form preparer, patient accounting clerk, and clinical technician. Course work includes processing, compiling, recording, and maintaining medical records; utilizing office equipment and software; medical law and ethics; billings and coding; and transcribing medical documents. Employment opportunities include the offices of allied health facilities, HMOs, insurance claims processors, laboratories, and manufacturers and suppliers of medical and hospital equipment.

<table>
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<tr>
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<tbody>
<tr>
<td>ACA 111</td>
<td>College Student Success</td>
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<td>Principles of Accounting I</td>
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<td>MED 121</td>
<td>Medical Terminology I</td>
<td>3</td>
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<td>OST 131</td>
<td>Keyboarding</td>
<td>1</td>
<td>2</td>
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<td>Medical Legal Issues</td>
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<td>Basic PC Literacy</td>
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<td>ENG 113</td>
<td>Literature-Based Research</td>
<td>or</td>
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<td>ENG 114</td>
<td>Professional Research &amp; Report</td>
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<td>Medical Terminology II</td>
<td>3</td>
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<td>Text Entry and Formatting</td>
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<td>Text Editing Applications</td>
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<td>Computerized General Ledger</td>
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<td>OST 122</td>
<td>Office Computations</td>
<td>1</td>
<td>2</td>
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<td>OST 184</td>
<td>Records Management</td>
<td>1</td>
<td>2</td>
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<tr>
<td>MAT 115</td>
<td>Mathematical Models</td>
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<tr>
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<td>Interpersonal Communication</td>
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<td>Survey of Economics</td>
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<td>OR</td>
<td>Principles of Microeconomics</td>
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<tr>
<td>ECO 252</td>
<td>Principles of Macroeconomics</td>
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<tr>
<td>OST 136</td>
<td>Word Processing</td>
<td>1 2 2</td>
<td></td>
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<tr>
<td>OST 148</td>
<td>Medical Coding, Billing, &amp; Ins</td>
<td>3 0 3</td>
<td></td>
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<tr>
<td>OST 201</td>
<td>Medical Transcription I</td>
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<tbody>
<tr>
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<td>OST 236</td>
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<td>OST 243</td>
<td>Medical Office Simulation</td>
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<td>Professional Development, Humanities/Fine Arts Elective</td>
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*Upon approval by academic advisor and division dean, cooperative education experience may be substituted for selected courses. Consult the division dean for details.*

### Medical Office Administration (D25310) Diploma Program

#### Fall Semester I

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<thead>
<tr>
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<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
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<td>College Student Success</td>
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<td>MED 121</td>
<td>Medical Terminology I</td>
<td>3 0 3</td>
</tr>
<tr>
<td>OST 131</td>
<td>Keyboarding</td>
<td>1 2 2</td>
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<tr>
<td>OST 148</td>
<td>Medical Coding, Billing, &amp; Ins</td>
<td>3 0 3</td>
</tr>
<tr>
<td>CIS 111</td>
<td>Basic PC Literacy</td>
<td>1 2 2</td>
</tr>
<tr>
<td>OST 136</td>
<td>Word Processing</td>
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<tr>
<td>OST 149</td>
<td>Medical Legal Issues</td>
<td>3 0 3</td>
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#### Spring Semester I

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<tbody>
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<td>Text Entry and Formatting</td>
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<td>OST 243</td>
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<td>OST 164</td>
<td>Text Editing Applications</td>
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#### Summer Semester I

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<tr>
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<tr>
<td>COM 120</td>
<td>Interpersonal Communication</td>
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<td>OST 184</td>
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<tr>
<td>OST 122</td>
<td>Office Computations</td>
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<td><strong>31 16 39</strong></td>
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Upon approval by academic advisor and division dean, cooperative education experience may be substituted for selected courses. Consult the division dean for details.

Note: Graduates from this program must have a reading score of 83 or better or must have successfully completed RED 090 - Improved College Reading.

Medical Sonography (A45440)
Associate's Degree Program

Career Information
The Medical Sonography curriculum provides knowledge and clinical skills in the application of high frequency sound waves to image internal body structures. Course work includes physics, cross-sectional anatomy, abdominal, introductory vascular, and obstetrical/gynecological sonography. Competencies are attained in identification of normal anatomy and pathological processes, use of equipment, fetal growth and development, integration of related imaging, and patient interaction skills. Graduates of accredited programs may be eligible to take examinations in ultrasound physics and instrumentation and specialty examinations administered by the American Registry of Diagnostic Medical Sonographers and find employment in clinics, physicians’ offices, mobile services, hospitals, and educational institutions.

Special Admission Requirements
- Application
- Attend information session
- High school transcript/Adult high school diploma/GED
- College transcripts, if applicable
- Placement tests
- Hospital visit arranged by admissions counselor
- Interview with program director
- Current Certification in CPR after acceptance
- Medical Form after acceptance

Fall Semester I

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
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<tbody>
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<td>SON 110</td>
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Spring Semester I

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<td>SON 225</td>
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Career Information
The Nuclear Medicine Technology curriculum provides the clinical and didactic experience to prepare students to qualify as entry-level Nuclear Medicine Technologists. Students will acquire the knowledge and skills necessary to properly perform clinical procedures. These skills include patient care, use of radioactive materials, operation of imaging and counting instrumentation, and laboratory procedures. Students are required to maintain current CPR certification during clinical classes. Graduates may be eligible to apply for certification/registration examinations given by the Nuclear Medicine Technology Certification Board and the American registry of Radiologic Technologists.

Special Admission Requirements
- Application
- Attend information session
- High school transcript/Adult high school diploma/GED
- College transcripts, if applicable
- Placement tests
- Hospital visit arranged by admissions counselor
- Medical Form
- Students are required to have their radiation exposure monitored. Semester fees for this service are due at registration and are not refundable.

Fall Semester I

<table>
<thead>
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<th>Units</th>
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<td>Anatomy &amp; Physiology I</td>
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<tr>
<td>CHM</td>
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Spring Semester I

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<td>NMT 134</td>
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<td>NMT 214</td>
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Total Hours: 48 + 72 + 73 = 193
Associate Degree Nursing (A45100)
Associate Degree Program

Career Information

The Associate Degree Nursing curriculum provides individuals with the knowledge and skills necessary to provide nursing care to clients and groups of clients throughout the life span in a variety of settings. Courses will include content related to the nurse’s role as provider of nursing care, as manager of care, as member within the discipline of nursing, and as a member of the interdisciplinary team. Graduates of this program are eligible to apply to take the National Council Licensure Examination (NCLEX-RN) which is required for practice as a Registered Nurse. Employment opportunities include hospitals, long term care facilities, clinics, physician’s offices, industry, and community agencies. Students successfully completing the first semester are eligible to apply to be listed in the Nurse Aide I Registry through the Division of Facilities Services, if they so desire. Students successfully completing the second semester are eligible to apply to be certified as a Nurse Aide II through the North Carolina Board of Nursing, if they so desire. Students successfully completing the fourth semester are eligible to apply to take the National Council Licensure Examination - Practical Nurse (PN), if they so desire and will have “Diploma in Nursing” indicated on their transcripts.

Special Admission Requirements
- Application
- Attend information session
- Career assessment workshop
- High school transcript/Adult high school diploma/GED
- College transcripts, if applicable
- Placement tests
- Nurse Entrance Test (NET)
- Current certification in CPR after acceptance
- Medical Form

<table>
<thead>
<tr>
<th>Semester</th>
<th>Course Code</th>
<th>Course Name</th>
<th>Units</th>
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<tr>
<td>Fall Semester I</td>
<td>BIO 168</td>
<td>Anatomy and Physiology I</td>
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<td>Anatomy and Physiology II</td>
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Total Hours: 47 73 72
Career Information
The Nursing Assistant curriculum prepares individuals to work under the supervision of licensed health care professionals in performing nursing care and services for persons of all ages. Course work emphasizes growth and development throughout the life span, personal care, vital signs, communication, nutrition, medical asepsis, therapeutic activities, accident and fire safety, household environment and equipment management, family resources and services and employment skills. Graduates of this curriculum may be eligible to be listed on the registry as a Nursing Assistant I and Nursing Assistant II. They may be employed in home health agencies, hospitals, clinics, nursing homes, extended care facilities and doctors’ offices.

Special Admission Requirements
• Must have a high school diploma or GED to receive the Nursing Assistant Certificate

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Office Systems Technology (A25360)
Associate’s Degree Program

Career Information
The Office Systems Technology 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 positions to middle management.

Fall Semester I
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<td>ACC 120</td>
<td>Principles of Financial Accounting</td>
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<tr>
<td>CIS 111</td>
<td>Basic PC Literacy</td>
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<td>ENG 111</td>
<td>Expository Writing</td>
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<td>ACC 150</td>
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Fall Semester II
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**PROGRAMS OF STUDY**

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Semester Total 13(15) 5(7) 16(17)

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Semester Total 14 8 18

Total Hours 56/58 37/39 75/76

* Upon approval by academic advisor and division dean, cooperative education experience may be substituted for selected courses. Consult the division dean for details.

Office Systems Technology (D25360) Diploma Program

**Fall Semester I**

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<td>111A</td>
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Semester Total 10 10 15

**Spring Semester I**

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<td>Text Entry and Formatting</td>
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<td>OST</td>
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<td>OST</td>
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Semester Total 16 8 20
### Summer Semester I

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<td>ACC 150 Accounting Software Applications</td>
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<tr>
<td>OST 184 Records Management</td>
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<td>2</td>
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<tr>
<td>COM 120 Interpersonal Communication</td>
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* Upon approval by academic advisor and division dean, cooperative education experience may be substituted for selected courses. Consult the division dean for details.

**Note:** Graduates from this program must have a reading score of 83 or better or must have successfully completed RED 090 - Improved College Reading.

### Office Systems Technology - Receptionist (C25360R) Certificate Program

#### Fall Semester I

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#### Summer Semester I

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<td>OST 184 Records Management</td>
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* Upon approval by academic advisor and division dean, cooperative education experience may be substituted for selected courses. Consult the division dean for details.

**Note:** Graduates from this program must have a reading score of 83 or better or must have successfully completed RED 090 - Improved College Reading.
Office Systems Technology - Software Applications  
(C25360S) Certificate Program

### Fall Semester I
- **CIS 111** Basic PC Literacy 1 2 2  
- **OST 131** Keyboarding 1 2 2  
- **OST 136** Word Processing 1 2 2  
  **Semester Total** 3 6 6

### Spring Semester I
- **CIS 120** Spreadsheet I 2 2 3  
- **CIS 152** Database Concepts & Applications 2 2 3  
- **OST 233** Office Publications Design 2 2 3  
  **Semester Total** 6 6 9

### Summer Semester I
- **CIS 169** Business Presentations 1 2 2  
  **Semester Total** 1 2 2  
  **Total Hours** 10 14 17

* Upon approval by academic advisor and division dean, cooperative education experience may be substituted for selected courses. Consult the division dean for details.

**Note:** Graduates from this program must have a reading score of 83 or better or must have successfully completed RED 090 - Improved College Reading.

### Office Systems Technology-Word Processing Clerk  
(C25360W) Certificate Program

### Fall Semester I
- **CIS 111** Basic PC Literacy 1 2 2  
- **OST 131** Keyboarding 1 2 2  
- **OST 136** Word Processing 1 2 2  
  **Semester Total** 3 6 6

### Spring Semester I
- **OST 134** Text Entry and Formatting 2 2 3  
- **OST 233** Office Publications Design 2 2 3  
- **OST 236** Adv Word/Information Processing 2 2 3  
- **OST 164** Text Editing Applications 3 0 3  
  **Semester Total** 9 6 12  
  **Total Hours** 12 12 18

* Upon approval by academic advisor and division dean, cooperative education experience may be substituted for selected courses. Consult the division dean for details.

**Note:** Graduates from this program must have a reading score of 83 or better or must have successfully completed RED 090 - Improved College Reading.
Career Information
The Ophthalmic Medical Assistant Program prepares individuals to provide support services under the supervision of a licensed physician specializing in Ophthalmology. The curriculum will provide the students with the knowledge and skills to work with Ophthalmologists and their patients. Course work includes didactic, laboratory, and clinical training with an emphasis on ophthalmic history, taking ocular measurements, ocular testing, lensometry, administering topical and oral medications, and caring for instruments. Graduates are employed in medical institutions, clinics, or physicians groups. The graduate is then a candidate to take the Joint Commission on Allied Health Personnel in Ophthalmology National Certification Exam for certified ophthalmic assistant (COA).

Special Admissions Requirements
- Application
- Attend information session
- Career assessment workshop
- High school transcript/Adult high school diploma/GED
- College transcripts, if applicable
- Placement tests
- Interview with program director
- PSB Health Occupations Aptitude
- Current Certification in CPR after acceptance
- Medical Form

Summer Semester
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<td>COM 231</td>
<td>Public Speaking</td>
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<tr>
<td>ENG 111</td>
<td>Expository Writing</td>
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<td>ENG 111A</td>
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OPH 150 Intro. to Ophthal. Med. Asst. 2 0 2
OPH 151 Ocular Anatomy & Physiology 2 0 2
PSY 150 General Psychology 3 0 3
Semester Total 13 2 14

Fall Semester
OPH 103 Introduction to Diseases of Eye 2 0 2
OPH 104 Basic Ophthalmic Pharmacology 2 0 2
OPH 105 Maint. of Ophthal. Instruments 2 0 2
OPH 106 Ophthal. Med. Asst. Practicum I 0 27 9
Semester Total 6 27 15

Spring Semester
OPH 107 Princ. of Glaucoma/Cataract 2 0 2
OPH 108 Ophthalmic Patient Care 2 0 2
OPH 109 Ophthal. Optics & Basic Refract. 2 0 2
OPH 110 Ophthal. Med. Asst. Practicum II 0 27 9
Semester Total 6 27 15
Total Hours 25 56 44

Note: Graduates from this program must have a reading score of 83 or better or must have successfully completed RED 090 - Improved College Reading.

Paralegal Technology (A25380)
Associate’s Degree Program

Career Information
The Paralegal Technology curriculum prepares individuals to work under the supervision of attorneys by performing routine legal tasks and assisting with substantive legal work. A paralegal/legal assistant may not practice law, give legal advice, or represent clients in a court of law. Course work includes substantive and procedural law in the areas of civil litigation, legal research and writing, real estate, family law, wills, estates, trusts, and commercial law. Required courses also include subjects such as English, mathematics, and computer utilization. Graduates are trained to assist attorneys in probate work, investigations, public records search, drafting and filing legal documents, research, and office management. Employment opportunities are available in private law firms, governmental agencies, banks, insurance agencies, and other business organizations.

Fall Semester I
ACA 111 College Student Success 1 0 1
ACC 115 College Accounting
or
ACC 120 Principles of Accounting I 3 2 4
ENG 111 Expository Writing 3 0 3
ENG 111A Expository Writing Lab 0 2 1
LEX 110 Introduction to Paralegal Study 2 0 2
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<td>ENG 113</td>
<td>Literature-Based Research</td>
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**Spring Semester II**

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Note: Graduates from this program must have a reading score of 83 or better or must have successfully completed RED 090 - Improved College Reading.
## Paralegal Technology (C25380F)
### Family Law Certificate

<table>
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*Upon approval by academic advisor and division dean, cooperative education experience may be substituted for selected courses. Consult the division dean for details.

**Note:** Graduates from this program must have a reading score of 83 or better or must have successfully completed RED 090 - Improved College Reading.

## Paralegal Technology (C25380W)
### Wills and Estates Certificate

<table>
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<tr>
<th>Semester</th>
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<th>Course Title</th>
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<td>LEX 120</td>
<td>Legal Research and Writing I</td>
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<td>OST 131</td>
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*Upon approval by academic advisor and division dean, cooperative education experience may be substituted for selected courses. Consult the division dean for details.

**Note:** Graduates from this program must have a reading score of 83 or better or must have successfully completed RED 090 - Improved College Reading.
Physical Therapist Assistant (A45640)
Associate’s Degree Program

Career Information
The Physical Therapist Assistant curriculum prepares graduates to work in direct patient care settings under supervision of physical therapists. Assistants work to improve or restore function by alleviation or prevention of physical impairment and perform other essential activities in a physical therapy department. Course work includes normal human anatomy and physiology, the consequences of disease or injury, and physical therapy treatment of a variety of patient conditions affecting humans throughout the life span. Graduates may be eligible to take the licensure examination administered by the NC Board of Physical Therapy Examiners. Employment is available in general hospitals, rehabilitation centers, extended care facilities, specialty hospitals, home health agencies, private clinics and public school systems.

Special Admission Requirements
- Application
- Attend information session
- Career assessment workshop
- High school transcript/Adult high school diploma/GED
- College transcripts, if applicable
- Placement tests
- PSB Health Occupations Aptitude
- Current Certification in CPR after acceptance
- Medical Form

Summer Semester I

<table>
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<tr>
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<td>ENG 111A</td>
<td>Expository Writing Lab</td>
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Fall Semester I

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<td>or COM 231</td>
<td>Public Speaking</td>
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<td>BIO 169</td>
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<td>PHY 110</td>
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Spring Semester I

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<td>PTA 135</td>
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<td>PTA 222</td>
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<td>PTA 215</td>
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<td>PTA 225</td>
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<td>PTA 235</td>
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Radiography (A45700)
Associate's Degree Program

Career Information
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.

Special Admission Requirements
- Application
- Attend information session
- Career assessment workshop
- High school transcript/Adult high school diploma/GED
- College transcripts, if applicable
- Placement tests
- Hospital visit arranged by admissions counselor
- PSB Health Occupations Aptitude
- Current Certification in CPR after acceptance
- Medical Form
- Students are required to have their radiation exposure monitored. Semester fees for this service are due at registration and are not refundable.
### Fall Semester I

<table>
<thead>
<tr>
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### Summer Semester I

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Speech-Language Pathology Assistant (A45730)
Associate's Degree Program

Career Information
The Speech-Language Pathology Assistant curriculum prepares graduates to work under the supervision of a Licensed Speech-Language Pathologist, who screens for speech, language, and hearing disorders and treats individuals with various communication disorders. Courses provide instruction in methods of screening for speech, language, and hearing disorders and in following written protocols designed to remediate individual communication problems. Supervised field experience includes working with patients of various ages and with various communication disorders. Graduates may be eligible for registration with the North Carolina Board of Examiners for Speech-Language Pathologist and Audiologist and must be supervised by a Licensed Speech-Language Pathologist. They may be employed in health care or education settings.

Special Admission Requirements
- Application
- Attend information session
- Career assessment workshop
- High school transcript/Adult high school diploma/GED
- College transcripts, if applicable
- Placement tests
- Hospital visit arranged by admissions counselor
- PSB Health Occupations Aptitude
- Current Certification in CPR after acceptance
- Medical Form

Fall Semester I
<table>
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<tr>
<th>Course</th>
<th>Title</th>
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### Summer Semester I

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<tr>
<td>ENG</td>
<td>114</td>
<td>Prof. Research &amp; Report</td>
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### Fall Semester II

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### Spring Semester II

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Surveying Technology (C40380)
Certificate Program

Career Information
The Surveying Technology curriculum provides training for technicians in the many areas of surveying. Surveyors are involved in land surveying, route surveying, construction surveying, photogrammetry, mapping, global positioning systems, geographical information systems, and other areas of property description and measurements. Course work includes the communication and computational skills required for boundary, construction, route, and control surveying, photogrammetry, topography, drainage, surveying law, and subdivision design, with emphasis upon applications of electronic data collection and related software including CAD. Graduates should qualify for jobs as survey party chief, instrument person, surveying technician, highway surveyor, mapper, GPS technician, and CAD operator. Graduates will be prepared to pursue the requirements necessary to become a Registered Land Surveyor in North Carolina.

Fall Semester I
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Spring Semester I
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<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CIS</td>
<td>Basic PC Literacy</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>SRV</td>
<td>Surveying I</td>
<td>2</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td><strong>Semester Total</strong></td>
<td><strong>3</strong></td>
<td><strong>8</strong></td>
</tr>
</tbody>
</table>

Fall Semester II
<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>SRV</td>
<td>Surveying II</td>
<td>2</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td><strong>Semester Total</strong></td>
<td><strong>2</strong></td>
<td><strong>6</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Total Hours</strong></td>
<td><strong>9</strong></td>
<td><strong>22</strong></td>
</tr>
</tbody>
</table>

Note: Graduates from this program must have a reading score of 65 or better or must have successfully completed RED 080 - Introduction to College Reading.
Truck Driver Training (C60300)
Certificate Program

Career Information
The Truck Driving Training curriculum prepares individuals to drive tractor trailers rigs. This program teaches proper driving procedures, safe driver responsibility, commercial motor vehicle laws and regulations, and the basic principles and practices for operating commercial vehicles. The course work includes motor vehicle laws and regulations, map reading, vehicle maintenance, safety procedures, daily logs, defensive driving, freight handling, security and fire protection. Highway driving training exercises, and classroom lectures are used to develop the student’s knowledge and skills. Graduates of the curriculum are qualified to take the Commercial Driver’s License and are employable by commercial trucking firms. They may also become owner-operators and work as private contract haulers. A certificate will be awarded upon successful completion (2.0 GPA) of a minimum of 12 credit hours from requirements listed below.

Special Admission Requirements
• Application
• Official driving record
• D. O. T. physical examination
• Reading placement test
• Disclosure form
• High school transcript
• Drug testing

TRP 100 Truck Driver Training 6 18 12
Total Hours 6 18 12

Note: Graduates from this program must have a reading score of 65 or better or must have successfully completed RED 080 - Introduction to College Reading.
College/University Transfer Programs

Associate in Arts
Associate in Fine Arts
Associate in Science

The Associate in Arts, Associate in Fine Arts, and Associate in Science degree programs are designed for persons who are planning to transfer to four-year colleges or universities. These programs provide opportunities to complete the first two years of general college courses with some degree of specialization. The college/university transfer programs, including core requirements, are outlined below.

Program electives may be selected from a variety of courses. Selection should be based upon the requirements of the four-year institution to which the student plans to transfer.

In the interest of helping students succeed in their chosen curricula, CCC&TI offers reading improvement courses, encompassing instruction in how to study, how to improve reading comprehension, how to increase vocabulary, and how to increase reading rate. Facilities and equipment are provided for diagnosing individual reading difficulties and for achieving peak skills in reading efficiency and comprehension. A student who desires to improve his/her reading ability or whose placement test scores indicate a need for greater reading proficiency may enroll in a reading course.

A core of general competencies in reading, writing, oral communications, mathematics, and the use of computers must be met by all graduates of a degree program. These requirements are met by completing the following courses: Reading - proficiency exam or completion of RED 090; Writing - ENG 111, 111A, 113; Oral Communication - COM 231; Mathematics - proficiency exam and math and/or computer course work; and Computer - any approved CIS or CSC course.

Courses from the college/university transfer programs at CCC&TI normally transfer to four-year colleges and universities. However, since many institutions and academic departments within institutions have specific course requirements, students planning to transfer to other schools must consult with the senior institution to which transfer is being considered. Their advisors and counselors in Student Services are also available for assistance.

Note: The Comprehensive Articulation Agreement (CAA) with the University of North Carolina system requires that a student have earned a grade of C or better in each course and have a cumulative grade point average of 2.0 when all grades are counted in the computation. Thus, in order to gain the advantages of the CAA, a student must attain a grade point average of at least 2.0.
Associate in Arts (A10100)

Associate in Arts degree candidates must complete the following general education courses and approved electives for a minimum of 65 credit hours with a program grade point average of 2.0 (“C”) or better.

<table>
<thead>
<tr>
<th>Semester Hours</th>
<th>Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Communication</td>
<td>10</td>
</tr>
</tbody>
</table>

This requirement is met by completing

A. ENG 111, 111A
B. ENG 113
C. COM 231

<table>
<thead>
<tr>
<th>Humanities/Fine Arts</th>
<th>12</th>
</tr>
</thead>
</table>

This requirement is met by completing 1 course from A below and 3 courses (unduplicated) from three different areas of B, C, D, E, F, G, H, and I as follows:

A. ENG 231, 232, 241, 242
B. ENG 231, 232, 241, 261, 262
C. ART 111, 114, 115
D. HUM 122, 130, 150, 160
E. MUS 110, 113
F. REL 110, 211, 212, 221
G. DRA 111
H. PHI 210, 215, 230, 240
I. SPA 111/181, 112/182, 211, 212

<table>
<thead>
<tr>
<th>Social Sciences</th>
<th>12</th>
</tr>
</thead>
</table>

This requirement is met by completing HIS 111 and 112 or HIS 121 and 122 and 2 courses from two different areas of B, C, D, E, F, and G as follows:

A. HIS 111, 112 or HIS 121, 122
B. ECO 251, 252
C. GEO 111, 130
D. POL 120
E. PSY 150
F. SOC 210, 213, 220
G. ANT, 210, 220, 221

<table>
<thead>
<tr>
<th>Math</th>
<th>7 - 8</th>
</tr>
</thead>
</table>

This requirement is met by completing A, B, or C, and D below:

A. MAT 171, 171A
B. MAT 172, 172A
C. MAT 271
D. Any mathematics course numbered higher than the last course completed, any approved CIS or CSC course or statistics.
Natural Science

This requirement is met by completing two courses, including accompanying lab work, from the courses that follow:

A. BIO 110, 111, 112, 140/140A
B. CHM 151, 152
C. PHY 110/110A, 151, 152, 251, 252
D. AST 151/151A, AST 152/152A

Other Requirements

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>CIS 110 or CIS 115</td>
<td>3</td>
</tr>
<tr>
<td>Physical Education*</td>
<td>2</td>
</tr>
<tr>
<td>Electives</td>
<td>10-11</td>
</tr>
</tbody>
</table>

* All students wishing to be exempt from the physical education requirements because of physical disability must first consult with the chair of the health sciences department. Every effort will be made to involve the student in some type of activity. Students exempt from the required physical education program because of physical disability will be required to take HEA 110, Personal Health/Wellness. PED 110, Fit and Well for Life (1-2-2) counts for only one of the two credit hours in physical education required for the Associate in Arts degree.

Associate in Fine Arts (A10200)

Music Specialist

The music specialist degree program is intended to provide students with general education requirements for the Associate in Fine Arts, to prepare students for junior-level entry into college or conservatory music programs and to provide students with opportunities to participate in and enjoy music activities. Music specialists also will be required to develop a secondary performance area (class music). Approval for entry into the program must be secured from the director of music.

Associate in Fine Arts degree candidates must complete the following general education courses in addition to professional program requirements for a total of 65 credit hours with an overall grade point average of 2.0 (“C”) or better

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Semester Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Communication</td>
<td>7</td>
</tr>
<tr>
<td>Humanities/Fine Arts</td>
<td>6</td>
</tr>
</tbody>
</table>

Semester Hours Credit

This requirement is met by completing ENG 111/111A, and 113

This requirement is met by completing COM 231 and 3 semester hours credit in literature to be selected from ENG 231, 232, 241, 242, 261, or 262.
Social Sciences

This requirement is met by completing either HIS 111, 112, 121, or 122 and 2 courses from two different areas of A, B, C, D, E below.

- A. ECO 251, 252
- B. GEO 111, 130
- C. POL 120
- D. PSY 150
- E. SOC 210, 213, or 220
- F. ANT 210, 220, 221

Math

This requirement is met by completing MAT 171 and 171A.

Natural Science

This requirement is met by completing AST 151/151A, BIO 111, CHM 151, PHY 110/110A, 151 or 251.

Other Requirements

- CIS 110 Introduction to Computers
- Professional Program Courses
- Electives

Music Theory

This requirement is met by completing MUS 121, 122, 221, and 222

Class Music

Vocal and instrumental (wind and percussion) majors will complete MUS 151P and 152P.* Piano majors will complete MUS 151V and 152V.

* Vocal and instrumental (wind and percussion) majors must study until proficiency is attained. This may require that additional courses (MUS 251P and 252P) be taken. If piano proficiency is not attained in two semesters, MUS 251P and 252P must be the two elective hours taken.

Applied Music

This requirement is met by completing MUS 161, 162, 261, and 262

Ensembles

This requirement is met by completing four of the following courses:
MUS 131, 132, 133, 134, 231, 232, 233, 234, 141, 142, 241, or 242

Notes:

1. Students must meet the receiving university’s foreign language and/or health physical education requirements, if applicable, prior to or after transfer to the senior institution.

2. AFA in Music students may have to pass an audition and/or have to take additional hours before attaining junior status in a Bachelor of Music degree program at the senior institution.
Visual Arts

Associate in Fine Arts degree candidates must complete the following general education courses in addition to professional program requirements for a total of 65 credit hours with an overall grade point average of 2.0 (“C”) or better.

<table>
<thead>
<tr>
<th>Semester Hours</th>
<th>Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Communication</td>
<td>7</td>
</tr>
</tbody>
</table>

This requirement is met by completing:

A. ENG 111/111A
B. ENG 113

<table>
<thead>
<tr>
<th>Humanities/Fine Arts</th>
<th>6</th>
</tr>
</thead>
</table>

This requirement is met by completing COM 231 and 3 semester hours credit in literature to be selected from ENG 231, 232, 241, 242, 261, or 262.

<table>
<thead>
<tr>
<th>Social Sciences</th>
<th>9</th>
</tr>
</thead>
</table>

This requirement is met by completing either HIS 111, 112, 121, or 122 and two courses from two different areas of A, B, C, D, E or F as follows:

A. ECO 251, 252
B. GEO 111, 130
C. POL 120
D. PSY 150
E. SOC 210, SOC 213, SOC 220
F. ANT 210, ANT 220, ANT 221

<table>
<thead>
<tr>
<th>Math</th>
<th>3</th>
</tr>
</thead>
</table>

This requirement is met by completing MAT 161.

<table>
<thead>
<tr>
<th>Natural Science</th>
<th>4</th>
</tr>
</thead>
</table>

This requirement is met by completing AST 151/151A, BIO 111, CHM 151, PHY 110/110A, 151, or 251.

<table>
<thead>
<tr>
<th>Professional Program Courses</th>
<th>36</th>
</tr>
</thead>
</table>

The following courses are required (15 SHC):

ART 114 Art History Survey I (3 SHC)
ART 115 Art History Survey II (3 SHC)
ART 121 Design I (3 SHC)
ART 122 Design II (3 SHC)
ART 131 Drawing I (3 SHC)

21 additional hours of the following courses are required:

ART 132 Drawing II (3 SHC)
ART 135 Figure Drawing I (3 SHC)
ART 171 Computer Art (3 SHC)
ART 231  Printmaking I  (3 SHC)
ART 240  Painting I  (3 SHC)
ART 241  Painting II  (3 SHC)
ART 261  Photography I  (3 SHC)
ART 262  Photography II  (3 SHC)
ART 271  Computer Art II  (3 SHC)
ART 281  Sculpture  (3 SHC)
ART 282  Sculpture II  (3 SHC)
ART 283  Ceramics I  (3 SHC)
ART 284  Ceramics II  (3 SHC)
ART 289  Museum Study  (3 SHC)

**Total hours in program**  65 SHC

**Notes:**
1. Students must meet the receiving university’s foreign language and/or health physical education requirements, if applicable, prior to or after transfer to the senior institution.

2. Graduates with the AFA in Visual Arts may have to pass a portfolio review and/or take additional hours before attaining junior status in a Bachelor of Arts or Fine Arts degree program at the senior institution.

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**Associate in Science (A10400)**

Associate in Science degree candidates must complete the following general education courses and approved electives for a minimum of 65 credit hours with a program grade point average of 2.0 (“C”) or better.

<table>
<thead>
<tr>
<th>Semester Hours Credit</th>
<th>Communication</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>................................. 7</td>
</tr>
<tr>
<td>This requirement is met by completing the following:</td>
<td></td>
</tr>
<tr>
<td>A. ENG 111/111A</td>
<td></td>
</tr>
<tr>
<td>B. ENG 113</td>
<td></td>
</tr>
</tbody>
</table>

| Humanities/Fine Arts | ................................. 12 |
| This requirement is met by completing COM 231, 1 course from A below, and 2 (unduplicated) courses from two areas of B, C, D, E, F, G, H, and I below. |
| A. ENG 231, 232, 241, 242 |
| B. ENG 231, 232, 241, 261, 262 |
| C. ART 111, 114, 115 |
| D. HUM 122, 130, 150, 160 |
| E. MUS 110, 113 |
| F. REL 110, 211, 212, 221 |
| G. DRA 111 |
H. PHI 210, 215, 230, 240
I. SPA 111/181, 112/182, 211, 212

Social Sciences ........................................................... 12
This requirement is met by completing 2 courses from two different areas of B, C, D, E, and F below.
   A. HIS 111, 112 or HIS 121, 122
   B. ECO 251, 252
   C. GEO 111, 130
   D. POL 120
   E. PSY 150
   F. SOC 210, 213, 220
   G. ANT 210, 220, 221

Mathematics and Natural Science .................................... 29
See specific pre-professional curriculum guideline for appropriate courses at www.ga.unc.edu/student-info/caa.

Other Requirements
   CIS 110 or CIS 115 ..................................................... 3
   Physical Education .................................................... 2

* All students wishing to be exempt from the physical education requirements because of physical disability must first consult with the dean of the health sciences department. Every effort will be made to involve the student in some type of activity. Students exempt from the required physical education program because of physical disability will be required to take HEA 110, Personal Health/Wellness. PED 110, Fit and Well for Life (1-2-2), counts for only one of the two credit hours in physical education required for the Associate in Arts degree.
## Electives for College Transfer Programs

### Special Programs/Projects

| ACC 120 | BIO 223 | MAT 175 | PHI 240 |
| ACC 121 | BIO 224 | MAT 252 | PHY 110 |
| ANT 210 | BIO 225 | MAT 263 | PHY 151 |
| ANT 220 | BIO 226 | MAT 271 | PHY 152 |
| ANT 221 | BUS 110 | MAT 272 | PHY 251 |
| ART 111 | BUS 115 | MAT 273 | PHY 252 |
| ART 114 | CHM 151 | MAT 285 | POL 120 |
| ART 115 | CHM 152 | MAT 280 | POL 130 |
| ART 116 | CHM 251 | MUS 110 | PSY 150 |
| ART 121 | CHM 252 | MUS 111 | PSY 237 |
| ART 122 | CIS 110 | MUS 113 | PSY 241 |
| ART 131 | CIS 115 | MUS 121 | PSY 281 |
| ART 132 | COM 120 | MUS 122 | REL 211 |
| ART 135 | CSC 134 | MUS 131 | REL 212 |
| ART 171 | CSC 136 | MUS 132 | REL 110 |
| ART 212 | ECO 151 | MUS 133 | REL 221 |
| ART 213 | ECO 251 | MUS 134 | SOC 210 |
| ART 231 | ECO 252 | MUS 141 | SOC 220 |
| ART 240 | DRA 111 | MUS 142 | SOC 213 |
| ART 241 | EDU 116 | MUS 151 | SPA 111 |
| ART 242 | ENG 241 | MUS 152 | SPA 181 |
| ART 261 | ENG 242 | MUS 161 | SPA 112 |
| ART 262 | ENG 231 | MUS 162 | SPA 161 |
| ART 263 | ENG 232 | MUS 210 | SPA 182 |
| ART 271 | ENG 261 | MUS 211 | SPA 211 |
| ART 281 | ENG 262 | MUS 217 | SPA 212 |
| ART 282 | ENG 125 | MUS 221 | SPA 281 |
| ART 283 | GEO 130 | MUS 222 | SPA 282 |
| ART 284 | GEO 111 | MUS 231 | |
| ART 285 | HIS 111 | MUS 232 | |
| ART 286 | HIS 112 | MUS 233 | |
| ART 288 | HIS 121 | MUS 234 | |
| ART 289 | HIS 122 | MUS 241 | |
| AST 151 | HIS 131 | MUS 242 | |
| AST 151A | HIS 132 | MUS 251 | |
| AST 152 | HIS 236 | MUS 252 | |
| AST 152A | HUM 120 | MUS 261 | |
| BIO 110 | HUM 122 | MUS 262 | |
| BIO 111 | HUM 130 | MUS 271 | |
| BIO 112 | HUM 150 | MUS 272 | |
| BIO 120 | HUM 211 | PCC 118 | |
| BIO 130 | HUM 212 | PHI 210 | |
| BIO 140 | MAT 151 | PHI 215 | |
| BIO 140A | MAT 172 | PHI 230 | |
Distance Learning at CCC&TI

Distance learning courses are innovative delivery methods of instruction. Telecourses involve the use of pre-recorded videotapes, broadcast programs, printed materials, and instructors or a combination thereof. Online courses integrate the use of a World Wide Web page developed by the course instructor and may also involve the use of electronic mail, print materials, pre-recorded videotapes, or CD-ROMS. Telenet courses offer a combination of pre-recorded videotapes and a course website. All three methods of instruction cover the same or equivalent materials and have the same credit hours as conventional courses. A faculty member serves as lead instructor/coordinator of the course and is available for orientation, question-answer sessions, office hours, testing and study groups when appropriate. Much instructor-student contact occurs via electronic mail, postal mail, or telephone. Some courses may require on-campus activities, such as laboratories, skill tests, discussion groups, or instructor conferences.

Admissions Policies for Distance Learning

Students who are enrolling in distance learning courses must adhere to all the admissions policies of the college. Additionally, students must meet the prerequisite requirements of individual courses through appropriate placement test scores and/or course completion as documented on official transcripts. Students are strongly advised to limit the number of distance learning courses for which they register, for these courses require a higher level of commitment and self-discipline than required in traditional classes. Historically, about 50 percent of students suc-
cessfully complete distance learning courses whereas about 60 percent successfully complete traditional classes. However, among those students who are successful completers, distance students earn higher grades than traditional students do. Students enrolling in Internet classes must consider their level of computer competence.

Hardware Requirements for Distance Learning

In addition to strong study habits, many distance learning courses require that students have a certain degree of technological skill and have access to certain technical equipment. For a telecourse, students must have access to a television and VCR since these courses are based on a collection of videotapes that is checked out to students at the course orientation. For an Internet or telenet course, students should meet at least the list of Minimum Requirements below. However, in order to have an optimum experience, with minimal technical glitches and/or free of excessive download waiting, students should try to meet or exceed the list of Recommended Hardware Requirements. Please keep in mind that other software (i.e. word processing software or Powerpoint) may be required for a particular course. Students should check with the course instructor for a complete list.

Recommended Requirements for Online Courses
(for optimum performance):

- Home access to Internet (or at least day, evening, and weekend access)
- E-mail account through an Internet Service Provider (rather than through a free service like Hotmail or Yahoo)
- Same E-mail account for entire semester (If you must change addresses, notify your instructor immediately.)
- Current anti-virus software, updated weekly, at least
- Netscape Navigator or Internet Explorer, versions 4.0 or higher, loaded on computer (*AOL users, see Important Note below)

Recommended Hardware Requirements:

<table>
<thead>
<tr>
<th>PC</th>
<th>MacIntosh</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pentium III/300 MHz processor</td>
<td>G3/300+ MHz processor</td>
</tr>
<tr>
<td>128+ MB memory</td>
<td>128+ MB memory</td>
</tr>
<tr>
<td>56K or faster internet connection</td>
<td>56K or faster internet connection</td>
</tr>
<tr>
<td>Windows 98 or higher</td>
<td>MAC OS 9 or higher</td>
</tr>
<tr>
<td>CD-ROM drive</td>
<td>CD-ROM drive</td>
</tr>
</tbody>
</table>

Important Note for America Online (AOL) Users! If you use AOL to access the Internet, you must download Netscape Navigator or Internet Explorer (both available free of charge) and use one of these browsers to access the Internet.
course rather than the AOL browser. The AOL browser will not allow you access to your course. Ask your course instructor for instructions if necessary.

Technical Competencies for Internet Classes
Before enrolling in an online course, you should be able to do the following:

Basic Computer and Troubleshooting Skills
• Start up and shut down computer system and peripherals.
• Identify and use icons, windows, menus.
• Start an application and create a document.
• Name, save, retrieve, revise a document.
• Use printing options.
• Insert and eject floppy disk and CD-ROM.
• Copy documents from hard disk to floppy disk and vice versa.
• Open and work with more than one application at a time.
• Protect and care for floppy disks.
• Make backup copies of key applications and documents.
• Use self-help resources to diagnose and correct common hardware and printing problems.
• Install and upgrade an application.
• Protect against computer viruses.
• Obtain technical assistance resources from your Internet Service Provider.

Word Processing Skills
• Enter and edit text.
• Copy and move blocks of text.
• Change text format and style, set margins, line spacing, and tabs.
• Check spelling, grammar, word usage.
• Insert page numbers, page breaks, or section breaks.

Internet and E-mail Skills
• Connect to the Internet or an online service.
• Use electronic mail (e-mail): compose, send, retrieve, read, respond to, forward messages, attach files.
• Be able to send and receive e-mail attachments.
• Access and use resources on the Internet and World Wide Web.
• Obtain/maintain an account on the Internet using an Online service.
• Connect a computer to a modem and telephone line for dial-in access.
• Create and use group addresses for E-mail.
• Install and change options/preferences in a web browser (Microsoft Internet Explorer or Netscape Navigator).
Course Descriptions

Special Coding System
- **F** Course will be offered Fall Semester
- **S** Course will be offered Spring Semester
- **SS** Course will be offered Summer Semester
- **D** Course will be offered when sufficient students and instructor are available.

The numbers to the right of the course title represent the following: class hours, lab hours, and credit hours. For example:

**ENG 203**  English Literature  3  0  3

In order to determine contact hours, add class hours and lab hours. For example:

**ART 120**  Ceramics I  2  2  3

Two class hours plus two lab hours equal four contact hours. If no prerequisite is listed, none is required.

In addition to the listed prerequisites, all students enrolling in college-level courses must demonstrate competency by achieving satisfactory scores on either the CPT, SAT, ACT, or the relevant proficiency assessment.

Prefix Codes and Courses

<table>
<thead>
<tr>
<th>Prefix</th>
<th>Course</th>
<th>Prefix</th>
<th>Course</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACA</td>
<td>Academic Related</td>
<td>CHM</td>
<td>Chemistry</td>
</tr>
<tr>
<td>ACC</td>
<td>Accounting</td>
<td>CIS</td>
<td>Information Systems</td>
</tr>
<tr>
<td>AER</td>
<td>Aviation Management and Career Pilot Technology</td>
<td>CIV</td>
<td>Civil Engineering</td>
</tr>
<tr>
<td>AHR</td>
<td>Air Conditioning, Heating,&amp; Refrigeration</td>
<td>CJC</td>
<td>Criminal Justice</td>
</tr>
<tr>
<td>ANT</td>
<td>Anthropology</td>
<td>COE</td>
<td>Cooperative Education</td>
</tr>
<tr>
<td>ART</td>
<td>Art</td>
<td>COM</td>
<td>Communication</td>
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<td>AST</td>
<td>Astronomy</td>
<td>COS</td>
<td>Cosmetology</td>
</tr>
<tr>
<td>AUB</td>
<td>Automotive Body Repair</td>
<td>CSC</td>
<td>Computer Science</td>
</tr>
<tr>
<td>AUT</td>
<td>Automotive</td>
<td>CVS</td>
<td>Cardiovascular Sonography</td>
</tr>
<tr>
<td>BIO</td>
<td>Biology</td>
<td>ECM</td>
<td>E-Commerce</td>
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<tr>
<td>BMT</td>
<td>Biomedical Equipment Technology</td>
<td>ECO</td>
<td>Economics</td>
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<tr>
<td>BPR</td>
<td>Blueprint Reading</td>
<td>EDU</td>
<td>Education</td>
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<td>BUS</td>
<td>Business</td>
<td>ELC</td>
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<td>CAT</td>
<td>Computed Tomography</td>
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<td>Code</td>
<td>Program Name</td>
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<td>ENG</td>
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<tr>
<td>EPT</td>
<td>Emergency Preparedness Tech.</td>
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</tr>
<tr>
<td>FIP</td>
<td>Fire Protection</td>
<td></td>
<td></td>
</tr>
<tr>
<td>GEO</td>
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General Course Descriptions

Academic Related

ACA 090 Study Skills (Pass/Fail) 3 0 3
This course is intended for those who placed into credit-level course work but who are not maintaining satisfactory academic progress toward meeting program goals. Topics include study skills, note taking, learning styles and strategies, test taking, goal setting, and self-assessment skills. Upon completion, students should be able to manage their learning experiences to successfully meet educational goals. This course is also intended to serve SSS students who need assistance to become acclimated to the college environment and workload. (F/S)

ACA 111 College Student Success (Pass/Fail) 1 0 1
This course introduces the college’s physical, academic, and social environment and promotes the personal development essential for success. Topics include campus facilities and resources; policies, procedures, and programs; study skills; and life management issues such as health, self-esteem, motivation, goal-setting, diversity, and communication. Upon completion, students should be able to function effectively within the college environment to meet their educational objectives. (F/S)

Accounting

ACC 115 College Accounting 3 2 4
This course introduces basic accounting principles for a business. Topics include the complete accounting cycle with end-of-period statements, bank reconciliation, payroll, and petty cash. Upon completion, students should be able to demonstrate an understanding of accounting principles and apply those skills to a business organization. This course is intended for those who have not received credit for ACC 120. (D)

ACC 120 Principles of Financial Accounting 3 2 4
Prerequisites: Reading Proficiency or RED 090 and MAT 060 or Math Placement. This course introduces business decision-making accounting information systems. Emphasis is placed on analyzing, summarizing, analyzing, reporting, and interpreting financial information. Upon completion, students should be able to prepare financial statements, understand the role of financial information in decision-making, and address ethical considerations. This course has been approved to satisfy the Comprehensive Articulation Agreement pre-major and/or elective course requirement. (F/S/SS)

ACC 121 Principles of Managerial Accounting 3 2 4
Prerequisite: ACC 120
This course includes a greater emphasis on managerial and cost accounting skills. Emphasis is placed on corporate and managerial accounting concepts for external and
internal analysis, reporting, and decision-making. Upon completion, students should be able to analyze and interpret transactions relating to managerial concepts, including product-costing systems. This course has been approved to satisfy the Comprehensive Articulation Agreement pre-major and/or elective course requirement. (S/SS)

ACC 122 Principles of Financial Accounting II
Prerequisite: ACC 120
This course provides additional instruction in the financial accounting concepts and procedures introduced in ACC 120. Emphasis is placed on the analysis of specific balance sheet accounts, with in-depth instruction on the accounting principles applied to those accounts. Upon completion, students should be able to analyze data, prepare journal entries, and prepare reports in compliance with generally accepted accounting principles. (F)

ACC 129 Individual Income Taxes
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 tax returns. Upon completion, students should be able to analyze basic tax scenarios, research applicable tax law, and complete various individual tax forms. (F)

ACC 130 Business Income Taxes
Prerequisite: ACC 129
This course introduces the relevant laws governing business and fiduciary income taxes. Topics include tax law as it relates to business organizations, electronic research and methodologies, and the use of technology for the preparation of business tax returns. Upon completion, students should be able to analyze basic tax scenarios, research applicable tax law, and complete various business tax forms. (S)

ACC 140 Payroll Accounting
Prerequisite: ACC 115 or ACC 120
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 technologies. (S)

ACC 149 Introduction to Accounting Spreadsheets
Prerequisites: ACC 115 or ACC 120
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. (S)
**ACC 150  Accounting Software Applications  1  2  2**  
Prerequisites: ACC 115 or ACC 120  
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. (SS)

**ACC 220  Intermediate Accounting I  3  2  4**  
Prerequisite: ACC 121  
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 financial statements. Upon completion, students should be able to demonstrate competence in the conceptual framework underlying financial accounting, including the application of financial standards. (S)

**ACC 225  Cost Accounting  3  0  3**  
Prerequisite: ACC 121  
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. (F)

**ACC 268  Information Systems & Internal Control  3  0  3**  
Prerequisite: ACC 121  
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, documenting 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 and to communicate effectively their analysis in written or oral presentations. (S)

**Aerospace and Flight Training**

**AER 110  Air Navigation  2  2  3**  
This course covers the basic elements of air navigation, fundamentals of pilotage and dead reckoning, and the use of a plotter, computer, and aerial charts. Topics include pilotage, dead reckoning, radio navigation, LORAN, Global Positioning Systems, and the use of FAA publications. Upon completion, students should be able to interpret aeronautical charts and apply navigational principles. (F)

**AER 111  Aviation Meteorology  3  0  3**  
This course covers the atmosphere, interpretation and measurement of meteorological elements, and the effects of such on aircraft operations and performance. Topics include heat exchanges in the atmosphere; temperature, pressure, stability, clouds, air
masses, fronts, and thunderstorms; and the use and interpretation of weather data. Upon completion, students should be able to analyze weather data for flight planning and safe flying. (S)

AER 112  Aviation Laws and FARs  2 0 2
This course provides an in-depth study of the state, federal, and international regulations forming the structure of aviation law. Emphasis is placed on Federal Aviation Regulations Parts 61, 91, and 135 with additional emphasis on legal issues in aviation law. Upon completion, students should be able to apply legal principles and interpret federal air regulations. (S)

AER 113  History of Aviation  2 0 2
This course provides a historical survey of the efforts of manned-flight. Topics include the development of aircraft, milestones in aviation, noted pioneers, and the socioeconomic impact of flight upon modern civilization. Upon completion, students should be able to demonstrate an understanding of the advancements that aviation has accrued for society and contemporary changes in aviation. (F)

AER 114  Aviation Management  3 0 3
This course covers operation of a flight department on a cost-effective basis and analysis of profit and loss statements. Topics include flight operations costs, aircraft acquisition analysis and cost comparisons, costs versus revenue, and break-even points. Upon completion, students should be able to calculate cost of flight operations and apply monthly and annual budget analysis. (F)

AER 115  Flight Simulator  0 2 1
This course covers instrument instruction and training in a FAA-approved flight simulator. Emphasis is placed on approach and navigation procedures including holding and missed approaches. Upon completion, students should be able to plan and execute an IFR flight and smoothly transition to instrument training in the aircraft. (SS)

AER 150  Private Pilot Flt Theory  2 2 3
This course covers the aeronautical knowledge required to meet the Federal Aviation Administration regulations for private pilot certification. Topics include the principles of flight, the flight environment, basic aircraft systems and performance, basic meteorology and weather data interpretation, and FAA regulations. Upon completion, students should be able to demonstrate the competencies required for the FAA written examination for a private pilot certificate. (F)

AER 151  Flight-Private Pilot  0 3 1
This course provides the hands-on training needed to qualify for a Federal Aviation Administration private pilot certificate. Topics include flight maneuvers (ground procedures, take-offs, climbs, level flight, turns, glides, stalls, slow flight, descents, slips, landings, emergency procedures) and cross-country planning and navigation. Upon completion, students should be able to demonstrate the competencies required for the flight test practical exam for the private pilot certificate. (F)
AER 160 Instrument Flight Theory 2 2 3
This course covers the required aeronautical knowledge of the Federal Aviation Administration Regulation Instrument Ground School. Topics include a study of instruments, systems, instrument flight charts, instrument flight planning, approach procedures, and the IFR regulations. Upon completion, students should be able to demonstrate the competencies required to complete the FAA written examination for an instrument rating. (S)

AER 161 Flight-Instrument Pilot 0 6 2
Prerequisite: AER 151
This course covers instruction and training in instrument flight planning including IFR navigation, VOR, ILS, ADF, and compliance with ATC procedures. Emphasis is placed on approach and navigation procedures, including holding and missed approaches, and development of skill in executing en route and approach procedures. Upon completion, students should be able to plan and execute an IFR flight and demonstrate competencies required for the FAA instrument pilot flight exam. (S/SS)

AER 161A Part-time 0 3 1
AER 161B Part-time 0 3 1

AER 170 Commercial Flight Theory 3 0 3
This course covers advanced aircraft control, cross-country operations, and other topics required for the FAA commercial pilot written exam. Emphasis is placed on the principles of aircraft performance and operation, take-off performance, cruise performance, descent and landing performance, and weight and balance computations. Upon completion, students should be able to demonstrate commercial pilot skills and competence in the materials required for the FAA written commercial pilot examination. (F)

AER 171 Flight-Commercial Pilot 0 6 3
Prerequisite: AER 161
This course provides the hands-on training needed to qualify for a Federal Aviation Administration commercial pilot certificate. Topics include flight instruction in advanced precision maneuvers, maximum performance take-off and landings, emergency procedures, operation of complex aircraft, aircraft performance, and range and fuel planning. Upon completion, students should be able to demonstrate competence in the areas of the flight test practical exam for the commercial pilot certificate. (F)

AER 211 Air Traffic Control 2 0 2
This course provides a detailed analysis of all aspects of air traffic control. Emphasis is placed on an in-depth analysis of air traffic control, including utilization of the air traffic environment based on the pilot's and controller's perspective. Upon completion, students should be able to operate an aircraft within the national airspace system under FAA air traffic control. (S)

AER 215 Flight Safety 3 0 3
This course covers the basic procedures and practices of aircraft accident prevention, accident investigation, and reporting. Topics include a comprehensive review of feder-
al regulations pertinent to aviation safety and analysis of actual aviation accident cases and their causes. Upon completion, students should be able to demonstrate an understanding and respect for specific personal factors such as attitude, motivation, and skill related to flight safety. (S)

AER 216 Engines and Systems 2 2 3
This course introduces piston and turbine aircraft engines and associated systems. Topics include aircraft hydraulic, pneumatic, electrical, air conditioning, and pressurization systems along with the theory of engine operations, including power and thrust computations. Upon completion, students should be able to apply principles of engine and systems operation. (F)

AER 218 Human Factors in Aviat. 2 0 2
This course analyzes interpersonal relationships in the cockpit and related psychological factors that affect pilot performance and efficiency during flight operations. Topics include cockpit management, judgment, aircraft and flight crew coordination and control, physiological factors, responsibility, and decision-making capabilities. Upon completion, students should be able to apply work-proven routines to stress management, crew responsibility, and the team concept in the cockpit. (F)

AER 280 Instruct Pilot Flt Theory 3 0 3
Prerequisite: AER 170
This course covers flight instruction and the skills and knowledge necessary to work effectively as a flight instructor. Topics include fundamentals of instruction, lesson planning, instructor regulations and endorsements, and related aeronautical knowledge. Upon completion, students should be able to demonstrate competence necessary for the Federal Aviation Administration Fundamentals of Instructing Test and the appropriate instructor written examination. (S)

AER 281 Flight-CFI 0 3 1
Prerequisites: AER 171
This course provides experience in preparation for the flight instructor practical test. Emphasis is placed on the ability to transition to right seat flight while teaching performance maneuvers including operation of a complex aircraft. Upon completion, students should be able to demonstrate competence in right seat operation and CFI maneuvers as specified in the FAA Practical Test Standards. (S)

AER 285 Flight-Multi-Engine 0 3 1
Prerequisite: AER 171
This course provides the flight training required to obtain a multi-engine rating. Topics include multi-engine safety procedures, single-engine operations and performance, Vmc, instrument approaches (single- and multi-engine), and emergency procedures. Upon completion, students should be able to demonstrate the competencies required for the flight test practical examination for a multi-engine rating. (S) See the SEL and SEM prefixes for generic Selected Topics and Seminar course descriptions.
## Anthropology

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<td>ANT 221</td>
<td>Comparative Cultures</td>
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ANT 210 General Anthropology  
This course introduces the physical, archaeological, linguistic, and ethnological fields of anthropology. Topics include human origins, genetic variations, archaeology, linguistics, primatology, and contemporary cultures. Upon completion, students should be able to demonstrate an understanding of the four major fields of anthropology. This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirements in social/behavioral sciences. (D)

ANT 220 Cultural Anthropology  
This course introduces the nature of human culture. Emphasis is placed on cultural theory, methods of fieldwork, and cross-cultural comparisons in the areas of ethnology, language, and the cultural past. Upon completion, students should be able to demonstrate an understanding of basic cultural processes and how cultural data are collected and analyzed. This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in social/behavioral sciences. (D)

ANT 221 Comparative Cultures  
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. This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in social/behavioral sciences. (D)

## Art

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<td>ART 111</td>
<td>Art Appreciation</td>
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<td>ART 114</td>
<td>Art History Survey I</td>
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ART 110 Introduction to Art  
This course is designed to introduce an awareness of art in the everyday world. Emphasis is placed on art as visual communication. Upon completion, students should be able to demonstrate an understanding of the meanings and purposes of art. (D)

ART 111 Art Appreciation  
This course introduces the origins and historical development of art. Emphasis is placed on the relationship of design principles to various art forms including but not limited to sculpture, painting, and architecture. Upon completion, students should be able to identify and analyze a variety of artistic styles, periods, and media. This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in humanities/fine arts. (D)

ART 114 Art History Survey I  
This course covers the development of art forms from ancient times to the Renaissance. Emphasis is placed on content, terminology, design, and style. Upon
completion, students should be able to demonstrate an historical understanding of art as a product reflective of human social development. This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in humanities/fine arts. (D)

ART 115 Art History Survey II 3 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 has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in humanities/fine arts. (D)

ART 116 Survey of American Art 3 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 decorative arts. Upon completion, students should be able to demonstrate understanding of the history of the American creative experience. (D)

ART 121 Design I 0 6 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. (F)

ART 122 Design II 0 6 3
Prerequisite: ART 121
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. (D)

ART 131 Drawing I 0 6 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. (F)

ART 132 Drawing II 0 6 3
Prerequisite: ART 131
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. (D)
ART 135  Figure Drawing I  0  6  3
Prerequisite: ART 131
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. (D)

ART 171  Computer Art I  0  6  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. This course has been approved to satisfy the Comprehensive Articulation Agreement pre-major and/or elective course requirement. (D)

ART 212  Gallery Assistantship I  0  2  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. (D)

ART 213  Gallery Assistantship II  0  2  1
Prerequisites: ART 212
This course provides additional experience in display techniques. Emphasis is placed on preparation of artwork for exhibition, alternative methods of installation, hardware systems, and exhibition graphics. Upon completion, students should be able to demonstrate independent decision-making and exhibition expertise. (D)

ART 231  Printmaking I  0  6  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. (D)

ART 240  Painting I  0  6  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. (D)

ART 241  Painting II  0  6  3
Prerequisite: ART 240
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. (D)
ART 242  Landscape Painting 0 6 3
Prerequisite: ART 240
This course introduces and practices the skills and techniques of open-air painting. Emphasis is placed on techniques of painting summer foliage, skies and mountains, and the elements of aerial perspective. Upon completion, students should be able to complete an open-air landscape painting employing brush, knife, scumbling and glazing techniques. (D)

ART 261  Photography I 0 6 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. (D)

ART 262  Photography II 0 6 3
Prerequisite: ART 261
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. (D)

ART 263  Color Photography 0 6 3
Prerequisite: ART 262
This course provides an introduction to the procedures and processes involved in color photography. Emphasis is placed on the study of light, filtration, exposure, and films along with the processing and printing of color negative materials. Upon completion, students should be able to demonstrate an understanding of color principles, theories, and processes by using them creatively in the production of color prints.

ART 271  Computer Art II 0 6 3
Prerequisite: ART 171
This course includes advanced computer imaging techniques. Emphasis is placed on creative applications of digital technology. Upon completion, students should be able to demonstrate command of computer systems and applications to express their personal vision. This course has been approved to satisfy the Comprehensive Articulation Agreement pre-major and/or elective course requirement. (D)

ART 281  Sculpture I 0 6 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 a variety of sculptural approaches. (D)
ART 282  Sculpture II 0 6 3
Prerequisite: ART 281
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. This course has been approved to satisfy the Comprehensive Articulation Agreement pre-major and/or elective course requirement. (D)

ART 283  Ceramics I 0 6 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. (D)

ART 284  Ceramics II 0 6 3
Prerequisite: ART 283
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. (D)

ART 285  Ceramics III 0 6 3
Prerequisite: ART 284
This course provides the opportunity for advanced self-determined work in sculptural and functional ceramics. Emphasis is placed on developing the technical awareness of clay bodies, slips, engobes, and firing procedures necessary to fulfill the student’s artistic goals. (D)

ART 286  Ceramics IV 0 6 3
Prerequisites: ART 285
This course provides the opportunity for self-determined work in sculptural and functional ceramics. Emphasis is placed on developing the technical awareness of glaze materials, glaze formulation, and firing techniques necessary to fulfill the student’s artistic goals. Upon completion, students should be able to demonstrate knowledge of materials and techniques necessary to successfully create original projects in the clay medium. This course has been approved to satisfy the Comprehensive Articulation Agreement pre-major and/or elective course requirement. (D)

ART 288  Studio 0 6 3
Prerequisite: Limited to those who have completed a sequence of art courses in the proposed area of study.
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. (D) See the SEL and SEM prefixes for generic Selected Topics and Seminar course descriptions.

ART 289 Museum Study 2 2 3
This course introduces research methods in the museum setting. Emphasis is placed on the chronology, styles, periods, context, and meaning in art. Upon completion, students should be able to demonstrate the advantage of first-hand and on-site research. This course has been approved to satisfy the Comprehensive Articulation Agreement pre-major and/or elective course requirement. (D)

Astronomy

AST 151 General Astronomy I 3 0 3
Prerequisite: MAT 070
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 has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in natural sciences/mathematics. (F/S)

AST 151A General Astronomy I Lab 0 2 1
Corequisite: AST 151
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 has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in natural sciences/mathematics. (FS) See the SEL and SEM prefixes for generic Selected Topics and Seminar course descriptions.

AST 152 General Astronomy II 3 0 3
Prequisite: AST 151
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.

AST 152A General Astronomy II Lab 0 2 1
Prequisite: AST 151
Corequisite: AST 152
This 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.
Automotive

AUT 110  Intro to Auto Technology  2  2  3
This course covers the basic concepts and terms of automotive technology, workplace safety, North Carolina state inspection, safety and environmental regulations, and use of service information resources. Topics include familiarization with components along with identification and proper use of various automotive hand and power tools. Upon completion, students should be able to describe terms associated with automobiles, identify and use basic tools and shop equipment, and conduct North Carolina safety/emissions inspections. (F)

AUT 115  Engine Fundamentals  2  3  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/repair of automotive engines using appropriate tools, equipment, procedures, and service information. (F)

AUT 116  Engine Repair  1  3  2
This course covers service/repair/rebuilding of block, head, and internal engine components. Topics include engine repair/reconditioning using service specifications. Upon completion, students should be able to rebuild/recondition an automobile engine to service specifications. (F)

AUT 131  Drive Trains  2  3  3
This course introduces principles of operation of basic automotive drive trains. Emphasis is placed on manual and automatic transmissions, transaxles, and final drive components. Upon completion, students should be able to describe, diagnose, and determine needed service and repairs. (SS)

AUT 141  Suspension & Steering Sys.  2  4  4
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 various steering and suspension components, check and adjust various alignment angles, and balance wheels. (S)

AUT 151  Brake Systems  2  2  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. (F)
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<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
<th>Hours</th>
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<tbody>
<tr>
<td>AUT 152</td>
<td>Brake Systems Lab</td>
<td>0</td>
<td>2</td>
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<tr>
<td>AUT 151</td>
<td>Corequisites: AUT 151</td>
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<td></td>
<td>This course provides a laboratory setting to enhance brake system skills. Emphasis is placed on practical experiences that enhance the topics presented in AUT 151. Upon completion, students should be able to apply the laboratory experiences to the concepts presented in AUT 151. (F)</td>
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<tr>
<td>AUT 161</td>
<td>Electrical Systems</td>
<td>2</td>
<td>6</td>
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<td>This course covers basic electrical theory and wiring diagrams, test equipment, and diagnosis/repair/replacement of batteries, starters, alternators, and basic electrical accessories. Topics include diagnosis and repair of battery, starting, charging, lighting, and basic accessory systems problems. Upon completion, students should be able to diagnose, test, and repair the basic electrical components of an automobile. (S)</td>
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<tr>
<td>AUT 162</td>
<td>Chassis Elect &amp; Electronics</td>
<td>2</td>
<td>2</td>
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<td>This course covers electrical/electronic diagnosis/repair, including wiring diagrams, instrumentation, and electronic/computer-controlled devices and accessories. Topics include interpreting wiring diagrams and diagnosis and repair of chassis electrical and electronic systems. Upon completion, students should be able to read and interpret wiring diagrams and determine/perform needed repairs on chassis electrical and electronic systems. (S)</td>
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<tr>
<td>AUT 164</td>
<td>Automotive Electronics</td>
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<td>2</td>
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<td>This course covers fundamentals of electrical/electronic circuitry, semi-conductors, and microprocessors. Topics include Ohm's law, circuits, AC/DC current, solid state components, digital applications, and the use of digital multimeters. Upon completion, students should be able to apply Ohm's law to diagnose and repair electrical/electronic circuits using digital multimeters and appropriate service information. (SS)</td>
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<tr>
<td>AUT 171</td>
<td>Heating &amp; Air Conditioning</td>
<td>2</td>
<td>3</td>
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<td>This course covers the theory of refrigeration and heating, electrical/electronic/pneumatic controls, and diagnosis/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 describe the operation, diagnose, and safely service climate control systems using appropriate tools, equipment, and service information. (SS)</td>
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<tr>
<td>AUT 181</td>
<td>Engine Perfor-Electrical</td>
<td>2</td>
<td>3</td>
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<tr>
<td>AUT 182</td>
<td>Corequisite: AUT 182</td>
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<td>This course covers the principles, systems, and procedures required for diagnosing and restoring engine performance using electrical/electronics test equipment. Topics include procedures for diagnosis and repair of ignition, emission control, and related electronic systems. Upon completion, students should be able to describe operation of and diagnose/repair ignition/emission control systems using appropriate test equipment and service information. (S)</td>
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</table>
AUT 182  Engine Perfor-Elec. Lab 0 3 1
Corequisite: AUT 181
This course provides a laboratory setting to enhance the skills for diagnosing and restoring engine performance using electrical/electronics test equipment. Emphasis is placed on practical experiences that enhance the topics presented in AUT 181. Upon completion, students should be able to apply the laboratory experiences to the concepts presented in AUT 181. (S)

AUT 183  Engine Perfor-Fuels 2 3 3
Corequisite: AUT 184
This course covers the principles of fuel delivery/management, exhaust/emission systems, and procedures for diagnosing and restoring engine performance using appropriate test equipment. Topics include procedures for diagnosis/repair of fuel delivery/management and exhaust/emission systems using appropriate service information. Upon completion, students should be able to describe, diagnose, and repair engine fuel delivery/management and emission control systems using appropriate service information and diagnostic equipment. (S)

AUT 184  Engine Perfor-Fuels Lab 0 3 1
Corequisite: AUT 183
This course provides a laboratory setting to enhance the skills for diagnosing and repairing fuel delivery/management and emission systems. Emphasis is placed on practical experiences that enhance the topics presented in AUT 183. Upon completion, students should be able to apply the laboratory experiences to the concepts presented in AUT 183. (S)

AUT 185  Emission Controls 1 2 2
This course covers the design and function of emission control devices. Topics include chemistry of combustion as well as design characteristics and emission control devices which limit tailpipe, crankcase, and evaporative emissions. Upon completion, students should be able to troubleshoot, test, and service emission control systems. (F)

AUT 221  Automatic Transmissions 2 6 4
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 and diagnose and repair automatic drive trains. (S)

AUT 231  Manual Drive Trains/Axles 2 3 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 service and repair using appropriate service information, tools, and equipment. Upon completion, students should be able to explain operational theory and diagnose and repair manual drive trains. (F)
AUT 271  Adv Heating & A/C  2  2  3
This course utilizes service information and test equipment to diagnose automatic temperature control and ventilation systems. Topics include advanced testing of sensors, actuators, and control modules using service information, on-board diagnostics, and/or appropriate test equipment. Upon completion, students should be able to perform advanced diagnosis and repair on automatic temperature control and ventilation systems. (SS)

AUT 281  Adv Engine Performance  2  2  3
This course utilizes service information and specialized test equipment to diagnose/repair power train control systems. Topics include computerized ignition, fuel and emission systems, related diagnostic tools and equipment, data communication networks, and service information. Upon completion, students should be able to perform advanced engine performance diagnosis and repair. (F)

Automotive Body Repair

AUB 111  Painting & Refinishing I  2  6  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. This is a diploma-level course. (F)

AUB 112  Painting & Refinishing II  2  6  4
Prerequisite: AUB 111
This course covers advanced painting techniques and technologies with an emphasis on identifying problems encountered by the refinishing technician. Topics include materials application, color matching, correction of refinishing problems, and other related topics. Upon completion, students should be able to perform spot, panel, and overall refinishing repairs and identify and correct refinish problems. This is a diploma-level course. (S)

AUB 114  Special Finishes  1  2  2
Prerequisite: AUB 111
This course introduces multistage finishes, custom painting, and protective coatings. Topics include base coats, advanced intermediate coats, clear coats, and other related topics. Upon completion, students should be able to identify and apply specialized finishes based on accepted industry standards. This is a diploma-level course. (S)

AUB 121  Non-Structural Damage I  1  4  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. This is a diploma-level course. (F)

AUB 122 Non-Structural Damage II 2 6 4
This course covers safety, tools, and advanced body repair. Topics include shop safety, damage analysis, tools and equipment, advanced repair techniques, materials selection, materials usage, movable glass, and other related topics. Upon completion, students should be able to identify and repair or replace direct and indirect damage to accepted standards including movable glass and hardware. This is a diploma-level course. (S)

AUB 132 Structural Damage II 2 6 4
Prerequisite: AUB 131
This course provides an in-depth study of structural damage analysis and repairs to vehicles that have received moderate to heavy structural damage. Topics include shop safety, structural analysis and measurement, equipment, structural glass, advanced repair techniques, structural component replacement and alignment, and other related topics. Upon completion, students should be able to analyze and perform repairs according to industry standards. This is a diploma-level course. (S)

AUB 136 Plastics and Adhesives 1 4 3
This course covers safety, plastic and adhesive identification, and the various repair methods of automotive plastic components. Topics include safety, identification, preparation, material selection, and the various repair procedures including refinishing. Upon completion, students should be able to identify, remove, repair, and/or replace automotive plastic components in accordance with industry standards. This is a diploma-level course. (SS)
AUB 141  Mech. & Elec. Component 2 2 3
This course covers the basic principles of automotive mechanical and electrical components. Topics include personal and environmental safety and suspension and steering, electrical, brake, heating and air-conditioning, cooling, drive train, and restraint systems. Upon completion, students should be able to identify system components and perform basic system diagnostic checks and/or repairs according to industry standards. This is a diploma-level course. (SS)

AUB 162  Autobody Estimating 1 2 2
This course provides a comprehensive study of autobody estimating. Topics include collision damage analysis, industry regulations, flat-rate and estimated time, and collision estimating manuals. Upon completion, students should be able to prepare and interpret a damage report. This is a diploma-level course. (SS)
See the SEL and SEM prefixes for generic Selected Topics and Seminar course descriptions.

Biology

Initial student placement in developmental courses is based on individual college placement testing policies and procedures. Students should begin developmental course work at the appropriate level indicated by the college’s placement test.

BIO 094  Concepts of Human Biology 3 2 4
Corequisite: RED 090
This course focuses on fundamental concepts of human biology. Topics include terminology, biochemistry, cell biology, tissues, body systems, and other related topics. Upon completion, students should be able to demonstrate preparedness for college-level anatomy and physiology courses. (D)

BIO 110  Principles of Biology 3 3 4
Prerequisite: Reading Proficiency or RED 090
This course provides a survey of fundamental biological principles of non-science majors. Emphasis is placed on basic chemistry, cell biology, metabolism, genetics, taxonomy, evolution, ecology, diversity, and other selected topics. Upon completion, students should be able to demonstrate increased knowledge and better understanding of biology as it applies to everyday life.

BIO 111  General Biology I 3 3 4
Prerequisite: Reading Proficiency or RED 090
This course introduces the principles and concepts of biology. Emphasis is placed on basic biological chemistry, cell structure and function, metabolism and energy transformation, genetics, evolution, classification, and other related topics. Upon completion, students should be able to demonstrate understanding of life at the molecular and cellular levels. This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in natural sciences/mathematics. (F)
### BIO 112 General Biology II 3 3 4
Prerequisites: BIO 111 and Reading Proficiency or RED 090
This course is a continuation of BIO 111. Emphasis is placed on organisms, 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 has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in natural sciences/mathematics. (S)

### BIO 120 Introductory Botany 3 3 4
Prerequisite: BIO 110 or BIO 111
This course provides an introduction to classification, relationships, structure, and function of plants. Topics include reproduction and development of seed and non-seed plants, levels of organization, form and function systems, and a survey of major taxa. Upon completion, students should be able to demonstrate comprehension of plant form and function, including selected taxa of both seed and non-seed plants. This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in natural sciences/mathematics. (D)

### BIO 130 Introductory Zoology 3 3 4
Prerequisite: BIO 110 or BIO 111
This course provides an introduction to the classification, relationships, structure, and function of major animal phyla. Emphasis is placed on levels of organization, reproduction and development, comparative systems, and a survey of selected phyla. Upon completion, students should be able to demonstrate comprehension of animal form and function including comparative systems of selected groups. This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in natural sciences/mathematics. (D)

### BIO 140 Environmental Biology 3 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. This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in natural sciences/mathematics. (D)

### BIO 140A Environmental Biology Lab 0 3 1
Corequisite: BIO 140
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. (D)
BIO 163  Basic Anatomy and Physiology  4  2  5
Prerequisite: Reading Proficiency or RED 090
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 home-
ostasis, 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. (F)

BIO 168  Anatomy and Physiology I  3  3  4
Prerequisite: Reading Proficiency or RED 090
This course provides a comprehensive study of the anatomy and physiology of the human
body. Topics include body organization, homeostasis, cytology, histology, and the integu-
mentary, skeletal, muscular, and nervous systems and special senses. Upon completion, stu-
dents should be able to demonstrate an in-depth understanding of principles of anatomy
and physiology and their interrelationships. This course has been approved to satisfy the
Comprehensive Articulation Agreement pre-major and/or elective course requirement. (F/SS)

BIO 169  Anatomy and Physiology II  3  3  4
Prerequisites: BIO 168 & Reading Proficiency or RED 090
This course provides a continuation of the comprehensive study of the anatomy and
physiology of the human body. Topics include the endocrine, cardiovascular, lymphat-
ic, respiratory, digestive, urinary, and reproductive systems as well as metabolism,
nutrition, acid-base balance, and fluid and electrolyte balance. Upon completion, stu-
dents should be able to demonstrate an in-depth understanding of principles of anato-
my and physiology and their interrelationships. This course has been approved to sat-
isfy the Comprehensive Articulation Agreement pre-major and/or elective course
requirement. (F/S)

BIO 170  Introductory Microbiology  3  3  4
Prerequisite: Reading proficiency or RED 090
This course introduces fundamental concepts of microbiology with emphasis on the
relationships of microorganisms to humans. Topics include common groups of
microorganisms and their relationships to human disease, including means of trans-
mission, body defenses, prevention, control, and treatment. Upon completion, stu-
dents should be able to practice and recognize the value of aseptic technique in micro-
bial control. (S/SS)

BIO 223  Field Botany  2  3  3
Prerequisite: BIO 112
This course provides a field and laboratory study of local flora. Emphasis is placed on
local flora classification, identification, and ecology by the use of keys and field stud-
ies. Upon completion, students should be able to use keys for classification and identi-
fication of local flora and to demonstrate an understanding of plant ecology. This
course has been approved to satisfy the Comprehensive Articulation Agreement pre-
major and/or elective course requirement. (D)
BIO 224 Local Flora Spring 1 2 2
This course provides an introduction to the identification of native plants. Emphasis is placed on spring wild flowers. Upon completion, students should be able to identify a variety of spring wild flowers and native plants. This course has been approved to satisfy the Comprehensive Articulation Agreement pre-major and/or elective course requirement. (D)

BIO 225 Local Flora Summer 1 2 2
This course provides an introduction to the identification of native plants. Emphasis is placed on summer wild flowers. Upon completion, students should be able to identify a variety of summer wild flowers and native plants. This course has been approved to satisfy the Comprehensive Articulation Agreement pre-major and/or elective course requirement. (D)

BIO 226 Local Flora Fall 1 2 2
This course provides an introduction to the identification of native plants. Emphasis is placed on fall wild flowers. Upon completion, students should be able to identify a variety of fall wild flowers and native plants. This course has been approved to satisfy the Comprehensive Articulation Agreement pre-major and/or elective course requirement. (D) See the SEL and SEM prefixes for generic Selected Topics and Seminar course descriptions.

Biomedical Equipment Technology

BMT 111 Intro to Biomed Field 1 0 1
This course introduces the fundamental concepts of the health care delivery system. Topics include hospital organization and structure, BMET duties and responsibilities, and the professional and social interrelationships between services. Upon completion, students should be able to demonstrate an understanding of hospital organization as related to BMET duties. (F)

BMT 112 Hospital Safety Standards 2 2 3
This course covers national, state, and local standards pertaining to hospital safety. Topics include electrical safety, gas safety, SMDA reporting, and JCAHO and FPA compliance. Upon completion, students should be able to conduct PM and safety inspections in compliance with safety regulations. (F)

BMT 120 Biomedical Anatomy & Physiology 2 2 3
This course provides a basic study of human anatomy and physiology with emphasis on biomonitoring of body systems. Topics include homeostasis; cells and tissues; and the structure, function, and monitoring of body systems. Upon completion, students should be able to demonstrate a basic understanding of the structure, function, and biomedical monitoring of human body systems. (S)

BMT 211 Biomedical Measurements 2 2 3
This course introduces the human-instrument system and problems encountered in
attempting to obtain measurements from a living body. Topics include electrodes, transducers, instrumentation, amplifiers, electrocardiographs, monitors, recorders, defibrillators, ESU units, and related equipment. Upon completion, students should be able to analyze, troubleshoot, repair, and calibrate diagnostic and therapeutic equipment. (F)

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<th>Course</th>
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<tbody>
<tr>
<td>BMT 212</td>
<td>BMET Instrumentation I</td>
<td>3 6 6</td>
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<tr>
<td>BMT 213</td>
<td>BMET Instrumentation II</td>
<td>2 3 3</td>
</tr>
<tr>
<td>BMT 223</td>
<td>Imaging Tech/Laser Fund</td>
<td>3 2 4</td>
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<tr>
<td>BMT 225</td>
<td>Biomed Troubleshooting</td>
<td>1 4 3</td>
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</table>

This course covers theory of operation, circuit analysis, troubleshooting techniques, and medical applications for a variety of instruments and devices. Topics include instruments found in clinical laboratories, intensive care units, and research facilities. Upon completion, students should be able to repair, calibrate, and certify that instrumentation meets manufacturers’ original specifications. (F)

BPR 111 Blueprint Reading 1 2 2
This course introduces the basic principles of blueprint reading. Topics include line types, orthographic projections, dimensioning methods, and notes. Upon completion, students should be able to interpret basic blueprints and visualize the features of a part. (F)
## BPR 121 Blueprint Reading: Mech

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<th>Credits</th>
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<th>Prerequisites</th>
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<td>1 2 2</td>
<td>Blueprint Reading: Mech</td>
<td>BPR 111 or MAC 131</td>
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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. (S) See the SEL and SEM prefixes for generic Selected Topics and Seminar course descriptions.

### Business

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<th>Course Code</th>
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<tr>
<td>BUS 110</td>
<td>Introduction to Business</td>
<td>3 0 3</td>
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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. (F)

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<th>Course Code</th>
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<tr>
<td>BUS 115</td>
<td>Business Law I</td>
<td>3 0 3</td>
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This course introduces the ethics and legal framework of business. Emphasis is placed on contracts, negotiable instruments, Uniform Commercial Code, and the working of the court systems. Upon completion, students should be able to apply ethical issues and laws covered to select business decision-making situations. This course has been approved to satisfy the Comprehensive Articulation Agreement premajor and/or elective course requirement. (D)

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<tr>
<td>BUS 121</td>
<td>Business Math</td>
<td>2 2 3</td>
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Prerequisites: Grade of C or higher in MAT 060 and in RED 090 or satisfactory score on the math and reading placement exams. 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. (F)

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<td>BUS 125</td>
<td>Personal Finance</td>
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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. (F)

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<tr>
<td>BUS 137</td>
<td>Principles of Management</td>
<td>3 0 3</td>
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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. (F/S)

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<tr>
<td>BUS 147</td>
<td>Business Insurance</td>
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This course surveys the basic concepts of risk management. Topics include principles and applications of health, property, life, and casualty insurance. Upon completion,
students should be able to evaluate different insurance needs and assist an organization in acquiring adequate insurance coverage. (S)

**BUS 153 Human Resource Management 3 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. (S)

**BUS 225 Business Finance 2 2 3**
Prerequisite: ACC 120
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. (F)

**BUS 230 Small Business Management 3 0 3**
This course introduces the challenges of entrepreneurship including the start-up 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. (F)

**BUS 240 Business Ethics 3 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 work force and society. (F/S)

**BUS 260 Business Communication 3 0 3**
Prerequisite: ENG 111 and OST 131 Keyboarding or proficiency exam.
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. (S)

**BUS 270 Professional Development 3 0 3**
This course provides basic knowledge of self-improvement techniques as related to success in the professional world. Topics include positive human relations, job-seeking skills, and projecting positive self-image. Upon completion, students should be able to demonstrate competent personal and professional skills necessary to get and keep a job. (S)
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisites</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CVS 160</td>
<td>CVS Clinical Ed I</td>
<td>0 15 5</td>
<td>Prerequisite: Enrollment in the Cardiovascular Sonography program</td>
<td>This course provides active participation in clinical sonography. Emphasis is placed on imaging, processing, and technically evaluating sonographic examinations. Upon completion, students should be able to image, process, and evaluate sonographic examinations. (F)</td>
</tr>
<tr>
<td>CVS 161</td>
<td>CVS Clinical Ed II</td>
<td>0 24 8</td>
<td>Prerequisite: CVS 160</td>
<td>This course provides continued participation in clinical sonography. Emphasis is placed on imaging, processing, and technically evaluating sonographic examinations. Upon completion, students should be able to image, process, and evaluate sonographic examinations. (S)</td>
</tr>
<tr>
<td>CVS 162</td>
<td>CVS Clinical Ed III</td>
<td>0 15 5</td>
<td>Prerequisite: CVS 161</td>
<td>This course provides continued participation in clinical sonography. Emphasis is placed on imaging, processing, and technically evaluating sonographic examinations. Upon completion, students should be able to image, process, and evaluate sonographic examinations. (SS)</td>
</tr>
<tr>
<td>CVS 163</td>
<td>Echo I</td>
<td>3 2 4</td>
<td>Prerequisite: Enrollment in the Cardiovascular Sonography program</td>
<td>This course covers cardiac anatomy and introduces cardiac scanning techniques. Topics include normal cardiac anatomy, Doppler physics, and 2-D and M-mode imaging. Upon completion, students should be able to perform 2-D and M-mode studies. (F)</td>
</tr>
<tr>
<td>CVS 164</td>
<td>Echo II</td>
<td>3 2 4</td>
<td>Prerequisite: CVS 163</td>
<td>This course is a continuation of CVS 163 with continued study of 2-D and M-mode imaging. Emphasis is placed on continuous wave, pulsed wave, color, and power Doppler imaging of normal and abnormal cardiac conditions. Upon completion, students should be able to perform and recognize normal and abnormal cardiac studies. (S)</td>
</tr>
<tr>
<td>CVS 260</td>
<td>CVS Clinical Ed IV</td>
<td>0 24 8</td>
<td>Prerequisite: CVS 162</td>
<td>This course provides continued active participation in clinical sonography. Emphasis is placed on imaging, processing, and technically evaluating sonographic examinations. Upon completion, students should be able to image, process, and evaluate sonographic examinations. (F)</td>
</tr>
<tr>
<td>CVS 261</td>
<td>CVS Clinical Ed V</td>
<td>0 24 8</td>
<td>Prerequisite: CVS 260</td>
<td>This course provides continued active participation in clinical sonography. Emphasis is</td>
</tr>
</tbody>
</table>
placed on imaging, processing, and technically evaluating sonographic examinations. Upon completion, students should be able to image, process, and evaluate sonographic examinations. (S) See the SEL and SEM prefixes for generic Selected Topics and Seminar course descriptions.

Chemistry

Initial student placement in developmental courses is based on individual college placement testing policies and procedures. Students should begin developmental course work at the appropriate level indicated by the college's placement test.

CHM 090 Chemistry Concepts 4 0 4
This course provides a non-laboratory based introduction to basic concepts of chemistry. Topics include measurements, matter, energy, atomic theory, bonding, molecular structure, nomenclature, balancing equations, stoichiometry, solutions, acids and bases, gases, and basic organic chemistry. Upon completion, students should be able to understand and apply basic chemical concepts necessary for success in college-level science courses. (D)

CHM 115 Concepts in Chemistry 3 0 3
Corequisite: CHM 115A
This course introduces basic chemical concepts and their applications to daily life for non-science majors. Topics include air pollution, global warming, energy, world of polymers, water and its importance to a technological society, food, drugs, and nuclear chemistry. Upon completion, students should be able to discuss, apply, and appreciate the impact of chemistry on modern society. (D)

CHM 115A Concepts in Chem Lab 0 2 1
Corequisite: CHM 115
This course is a laboratory for CHM 115. Emphasis is placed on laboratory experiences that enhance materials presented in CHM 115. Upon completion, students should be able to utilize basic laboratory procedures and apply them to chemical concepts presented in CHM 115. (D)

CHM 151 General Chemistry I 3 3 4
Prerequisites: MAT 080 and RED 090 or appropriate Math/Reading Placement. 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 has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in natural sciences/mathematics. (F)
CHM 152 General Chemistry II 3 3 4
Prerequisite: CHM 151, MAT 080, and RED 090 or appropriate Math/Reading placement.
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 has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in natural sciences/mathematics. (S)

CHM 251 Organic Chemistry I 3 3 4
Prerequisite: CHM 152
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. (D)

CHM 252 Organic Chemistry II 3 3 4
Prerequisite: CHM 251
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. (D) See the SEL and SEM prefixes for generic Selected Topics and Seminar course descriptions.

Civil Engineering

CIV 110 Statics/Strength of Materials 2 6 4
Prerequisites: MAT 121
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. (S)

CIV 125 Civil/Surveying CAD 1 6 3
Prerequisites: CIS 111 and EGR 115 and SRV 110
This course introduces civil/surveying computer-aided drafting (CAD) software. Topics include drawing, editing, and dimensioning commands; plotting; and other related civil/surveying topics. Upon completion, students should be able to produce civil/surveying drawings using CAD software. (D)
CIV 211    Hydraulics and Hydrology  2 3 3
Prerequisites: CIV 110 or MEC 250
This course introduces the basic engineering principles and characteristics of hydraulics and
hydrology. Topics include precipitation and runoff, fluid statics and dynamics, flow measure-
ment, and pipe and open channel flow. Upon completion, students should be able to analyze and
size drainage structures. (S)

CIV 250    Civil Eng Tech Project  1 3 2
This course includes an integrated team approach to civil engineering technology projects.
Emphasis is placed on project proposal, site selection, analysis/design of structures, construction
material selection, time and cost estimating, planning, and management of a project. Upon com-
pletion, students should be able to apply team concepts, prepare estimates, submit bid proposals,
and manage projects. (D)

Communication

For the AS and AFA programs, 3 SHC in Speech or Communication may be substitut-
ed for 3 SHC in Humanities or Fine Arts. Speech or Communication may not substi-
tute for the literature requirement.

COM 110    Intro to Communication  3 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 communi-
cation 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 con-
texts. Students will also explore careers in communication. This course has been
approved to satisfy the Comprehensive Articulation Agreement general education core
requirement in speech/communication. (D)

COM 120    Interpersonal Communication  3 0 3
Prerequisite: Reading proficiency or RED 090
This course introduces the practices and principles of interpersonal communication in
both dyadic and group settings. Emphasis is placed on the communication process, per-
ception, listening, self-disclosure, speech apprehension, ethics, nonverbal communication,
conflict, power, and dysfunctional communication relationships. Upon completion, stu-
dents should be able to demonstrate interpersonal communication skills, apply basic prin-
ciples of group discussion, and manage conflict in interpersonal communication situ-
atations. Students will also prepare and deliver presentations individually and in groups.
This course has been approved to satisfy the Comprehensive Articulation Agreement gen-
eral education core requirement in speech/communication. (F/S)

COM 231    Public Speaking  3 0 3
Prerequisites: Reading proficiency or RED 090 and ENG 111/111A
This course provides instruction and experience in preparation and delivery of speech-
es 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. Students will also demonstrate and apply basic interpersonal communication skills. This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in speech/communication. (F/S) See the SEL and SEM prefixes for generic Selected Topics and Seminar course descriptions.

**Computed Tomography**

**CAT 210**  
**CT Physics & Equipment**  
3 0 3  
Prerequisites: Enrollment in the CT/MRI program  
This course covers the system operations and components, image processing and display, image quality, and artifacts in computed tomography. Emphasis is placed on the data acquisition components, tissue attenuation conversions, image manipulation, and factors controlling image resolution. Upon completion, students should be able to understand the physics and instrumentation used in computed tomography. (F)

**CAT 211**  
**CT Procedures**  
4 0 4  
Prerequisites: Enrollment in the CT/MRI program  
Corequisites: CAT210  
This course is designed to cover specialized patient care, cross-sectional anatomy, contrast media, and scanning procedures in computed tomography. Emphasis is placed on patient assessment and monitoring, contrast agents use, radiation safety, methods of data acquisition, and identification of cross-sectional anatomy. Upon completion, students should be able to integrate all facets of the imaging procedures in computed tomography. (F)

**CAT 231**  
**CT Clinical Practicum**  
0 33 11  
Prerequisites: Enrollment in CT/MRI program  
This course provides the opportunity to apply knowledge gained from classroom instruction to the computed tomography clinical setting. Emphasis is placed on patient care and positioning, scanning procedures, and image production in computed tomography. Upon completion, students should be able to assume a variety of duties and responsibilities within the computed tomography clinical environment. (S)

**Computer Science**

**CSC 135**  
**COBOL Programming**  
2 3 3  
This course introduces computer programming using the COBOL programming language. Topics include input/output operations, sequence, selection, iteration, arithmetic operations, arrays/tables, and other related topics. Upon completion, students should be able to design, code, test, and debug COBOL language programs. (F)
CSC 138  RPG Programming  2 3 3
This course introduces computer programming using the RPG programming language. Topics include input/output operations, sequence, selection, iteration, arithmetic operations, arrays/tables, and other related topics. Upon completion, students should be able to design, code, test, and debug RPG language programs. (F)

CSC 139  Visual BASIC Programming  2 3 3
This course introduces event-driven computer programming using the Visual BASIC programming language. Topics include input/output operations, sequence, selection, iteration, arithmetic operations, arrays, forms, sequential files, and other related topics. Upon completion, students should be able to design, code, test, and debug Visual BASIC language programs. (F)

CSC 148  JAVA Programming  2 3 3
This course introduces computer programming using the JAVA language. Topics include selection, iteration, arithmetic and logical operators, classes inheritance, methods, arrays, user interfaces, basic applet creation and other related topics. Upon completion, students should be able to design, code, test, debug JAVA language programs. (F)

CSC 160  Intro to Internet Programming  2 2 3
This course introduces client-side Internet programming using HTML and Javascript. Topics include use of frames and tables, use of meta tags, Javascript techniques for site navigation. Upon completion, students should be able to write HTML documents that incorporate programming to provide web page organization and navigation functions. (S)

CSC 235  Advanced COBOL  2 3 3
Prerequisite: CSC 135
This course is a continuation of CSC 135 using COBOL with structured 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. (S)

CSC 238  Advanced RPG  2 3 3
Prerequisite: CSC 138
This course is a continuation of CSC 138 using RPG with structured 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. (S)

CSC 239  Advanced Visual BASIC  2 3 3
Prerequisite: CSC 139
This course is a continuation of CSC 139 using Visual BASIC with structured 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. (S)

Cooperative Education

**COE 111 Co-op Work Experience I**
0 10 1
This course provides work 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. (F/S)

**COE 112 Co-op Work Experience I**
0 20 2
This course provides work 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. (F/S)

**COE 113 Co-op Work Experience I**
0 30 3
This course provides work 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. (F/S)

**COE 114 Co-op Work Experience I**
0 40 4
This course provides work experience with a college-approved employer in an area related to the student's program of study. Emphasis is placed in 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. (F/S)

**COE 115 Work Exp Seminar I**
1 0 1
Corequisites: COE 111, COE 112, COE 113, or COE 114
This course provides opportunity for discussion of work-related topics and experiences. Emphasis will be placed on preparation for work with children and staff, activity planning for the selected age group, sharing work experiences, and problem solving. Upon completion, students should be able to demonstrate the ability to create developmentally appropriate activity plans which meet the age and curriculum needs of the classroom. (F/S)

**COE 121 Co-op Work Experience II**
0 10 1
Prerequisite: COE 111
This course provides work 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. (F/S)

COE 122  Co-op Work Experience II  
Prerequisite: COE 112  
This course provides work 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. (F/S)

COE 123  Co-op Work Experience II  
Prerequisite: COE 113  
This course provides work 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. (F/S)

COE 125  Work Exp Seminar II  
Corequisites: COE 121, COE 122, COE 123, or COE 124  
This course provides opportunity for discussion of work-related topics and experiences. Emphasis will be placed on understanding and meeting the needs of the individual child within the group, as well as on discussing work-related experiences and problem solving. Upon completion, students should be able to develop, through observation and interpretation, activity plans to strengthen skill areas for a particular child. (F/S)

COE 131  Co-op Work Experience III  
Prerequisite: COE 121  
This course provides work 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. (F/S)

COE 132  Co-op Work Experience III  
Prerequisite: COE 122  
This course provides work 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. (F/S)
COE 211  Co-op Work Experience IV  0  10  1
Prerequisite: COE 131
This course provides work 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. (F/S)

COE 221  Co-op Work Experience V  0  10  1
Prerequisite: COE 211
This course provides work 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. (F/S)

COE 231  Co-op Work Experience VI  0  10  1
Prerequisite: COE 221
This course provides work 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. (F/S)

Cosmetology

COS 111  Cosmetology Concepts I (Day Program)  4  0  4
Corequisite: COS 112
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. (F/S)

COS 111A Part-time (Evening Program)  2  0  2
COS 111B Part-time (Evening Program)  2  0  2
or
COS 111C Part-time (Huskins)  1  0  1
COS 111D Part-time (Huskins)  1  0  1
COS 111E Part-time (Huskins)  1  0  1
COS 111F Part-time (Huskins)  1  0  1

COS 112  Salon I (Day Program)  0  24  8
Corequisite: COS 111
This course introduces basic salon services. Topics include scalp treatments, shampoo-
ing, rinsing, hair color, design, hair cutting, permanent waving, pressing, relaxing, wigs, and other related topics. Upon completion, students should be able to safely and competently demonstrate salon services. (F/S)

COS 112A Part-time (Evening Program) 0 12 4
COS 112B Part-time (Evening Program) 0 12 4

or

COS 112C Part-time (Huskins) 0 6 2
COS 112D Part-time (Huskins) 0 6 2
COS 112E Part-time (Huskins) 0 6 2
COS 112F Part-time (Huskins) 0 6 2

COS 113 Cosmetology Concepts II (Day Program) 4 0 4
Prerequisites: COS 111 and COS 112
Corequisite: COS 114
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. (F/S)

COS 113A Part-time (Evening Program) 2 0 2
COS 113B Part-time (Evening Program) 2 0 2

COS 114 Salon II (Day Program) 0 24 8
Prerequisite: COS 112
Corequisite: COS 113
This course provides experience in a simulated salon setting. Topics include basic skin care, manicuring, nail application, scalp treatments, shampooing, rinsing, hair color, design, hair cutting, chemical restructuring, pressing, wigs, and other related topics. Upon completion, students should be able to safely and competently demonstrate these salon services. (F/S)

COS 114A Part-time (Evening Program) 0 12 4
COS 114B Part-time (Evening Program) 0 12 4

COS 115 Cosmetology Concepts III (Day Program) 4 0 4
Prerequisites: COS 111 and COS 112
Corequisite: COS 116
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. (SS)

COS 115A Part-time (Evening Program) 2 0 2
COS 115B Part-time (Evening Program) 2 0 2
### COURSE DESCRIPTIONS

**COS 116**  
**Salon III (Day Program)**  
0 12 4  
Prerequisite: COS 112  
Corequisite: COS 115  
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, hair cutting, chemical restructuring, pressing, and other related topics. Upon completion, students should be able to safely and competently demonstrate these salon services. (SS)

**COS 116A**  
Part-time (Evening Program)  
0 6 2  
**COS 116B**  
Part-time (Evening Program)  
0 6 2  

**COS 117**  
**Cosmetology Concepts IV (Day Program)**  
2 0 2  
Prerequisites: COS 111 and COS 112  
Corequisite: COS 118  
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. (F/S)

**COS 118**  
**Salon IV (Day Program)**  
0 21 7  
Corequisite: COS 117  
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. (F/S)

**COS 118A**  
Part-time (Evening Program)  
0 11 4  
**COS 118B**  
Part-time (Evening Program)  
0 10 3  

**COS 119**  
**Esthetics Concepts I**  
2 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. (D)

**COS 120**  
**Esthetics**  
0 18 6  
This course covers the concepts and techniques of esthetics. Topics include safety, skin care, make-up, aromatherapy, massage, and superfluous hair removal. Upon completion, students should be able to perform professional skin care and make-up services. (SS)

**COS 121**  
**Manicure/Nail Tech. I**  
4 6 6  
This course covers techniques of nail technology, hand and arm massage, and recognition of nail diseases and disorders. Topics include OSHA/safety, sanitation, bacteriolo-
gy, 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. (D)

COS 222  Manicure/Nail Tech. II  4 6 6
Prerequisite: COS 121
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. (D)

COS 223  Contemp Hair Coloring  1 3 2
Prerequisites: COS 111 and COS 112
This course covers basic color concepts, hair coloring problems, and application techniques. Topics include color theory, terminology, contemporary techniques, product knowledge, and other related topics. Upon completion, students should be able to identify a client's color needs and safely and competently perform color applications and correct problems. (F/S/SS)

COS 240  Contemp Design  1 3 2
Prerequisites: COS 111 and COS 112
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. (F/S/SS)

COS 251  Manicure Instr Concepts  8 0 8
Corequisite: COS 252
This course introduces manicuring 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 supervision techniques, and assess student classroom performance. (D)

COS 252  Manicure Instr Practicum  0 15 5
Corequisite: COS 251
This course covers supervisory and instructional skills for teaching manicuring students in a laboratory setting. Topics include demonstrations of services, supervision, student assessment, and other related topics. Upon completion, students should be able to demonstrate competence in the areas covered by the Manicuring Instructor Licensing Examination and meet program completion requirements. (D)

COS 271  Instructor Concepts I  5 0 5
Corequisite: COS 272
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. This is a certificate-level course. (D)

**COS 272 Instructor Practicum I**

0 21 7

Corequisite: COS 271

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. This is a certificate-level course. (D)

**COS 273 Instructor Concepts II**

5 0 5

Prerequisites: COS 271 and COS 272

Corequisite: COS 274

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. This is a certificate-level course. (D)

**COS 274 Instructor Practicum II**

0 21 7

Prerequisites: COS 271 and COS 272

Corequisite: COS 273

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. This is a certificate-level course. (S) See the SEL and SEM prefixes for generic Selected Topics and Seminar course descriptions. (D)

**Criminal Justice**

**CJC 100 Basic Law Enforce Trn**

8 30 18

This course covers the skills and knowledge needed for entry-level employment as a law enforcement officer in North Carolina. Emphasis is placed on topics and areas as defined by the North Carolina Administrative Code. Upon completion, students should be able to demonstrate competence in the topics and areas required for the state comprehensive examination. This is a certificate-level course. (F/S)
CJC 131  Criminal Law  
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 215  Organization & Administration  
This course introduces the components and functions of organization and administration as it applies to the agencies of the criminal justice system. Topics include operations/functions of organizations; recruiting, training, and retention of personnel; funding and budgeting; communications; span of control and discretion; and other related topics. Upon completion, students should be able to identify and discuss the basic components and functions of a criminal justice organization and its administrative operations. See the SEL and SEM prefixes for generic Selected Topics and Seminar course descriptions.

Design Drafting

DDF 211  Design Drafting I  
Prerequisite: DFT 112  
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. (S)

DDF 212  Design Drafting II  
Prerequisite: DDF 211  
This course stresses the integration of various drafting and design practices. Emphasis is placed on the creation of an original design. Upon completion, students should be able to apply drafting and design procedures to a design project of their choosing. This course is a unique concentration requirement of the Drafting and Design concentration in the Mechanical Engineering program. (F)

DDF 213  Design Drafting III  
Prerequisite: DDF 212  
This course provides an opportunity to produce all the documentation needed to complete a project for the manufacture of a product. Topics include materials, manufacturing processes, analysis, production drawings, calculations, and specifications. Upon completion, students should be able to research and produce all information needed to complete a project for manufacture. This course is a unique concentration requirement of the Drafting and Design concentration in the Mechanical Engineering program. (S)

DDF 214  Tool Design  
Prerequisite: DDF 212  
This course introduces the principles of tool design. Topics including gaging, die work, and cost analysis using available catalogs and studies using manufacturing processes.
Upon completion, students should be able to use catalogs to identify vendors and prepare working drawings for tooling. This course is a unique concentration requirement of the Drafting and Design concentration in the Mechanical Engineering program(s). See the SEL and SEM prefixes for generic Selected Topics and Seminar course descriptions.

### Drafting

**DFT 111  Technical Drafting I**  
1   3   2  
This course introduces basic drafting skills, equipment, and applications. Topics include sketching, measurements, lettering, dimensioning, geometric construction, orthographic projections and pictorial drawings, sections, and auxiliary views. Upon completion, students should be able to understand and apply basic drawing principles and practices. (F)

**DFT 111A  Technical Drafting I Lab**  
0   3   1  
Corequisites: DFT 111  
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. (F)

**DFT 112  Technical Drafting II**  
1   3   2  
Prerequisite: DFT 111  
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. (S)

**DFT 112A  Technical Drafting II Lab**  
0   3   1  
Corequisites: DFT 112  
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. (S)

**DFT 151  CAD I**  
2   3   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. (F)

**DFT 152  CAD II**  
2   3   3  
Prerequisite: DFT 151  
This course is a continuation of DFT 151. Topics include advanced two-dimensional, three-dimensional, and solid modeling and extended CAD applications. Upon completion, students should be able to generate and manage CAD drawings and models to produce engineering documents. (S)
### DFT 153 CAD III

**Prerequisites:** DFT 111 and DFT 151

This course covers basic principles of three-dimensional CAD wireframe and surface models. Topics include user coordinate systems, three-dimensional viewpoints, three-dimensional wireframes, and surface components and viewpoints. Upon completion, students should be able to create and manipulate three-dimensional wireframe and surface models. (F)

### Drama/Theatre

#### DRA 111 Theatre Appreciation

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. This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in humanities/fine arts. (D) See the SEL and SEM prefixes for generic Selected Topics and Seminar course descriptions.

### Economics

#### ECO 151 Survey of Economics

**Prerequisite:** Preading Proficiency or RED 090

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. This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in social/behavioral sciences. (F/S)

#### ECO 251 Principles of Microeconomics

**Prerequisite:** Preading Proficiency or RED 090

This course introduces economic analysis of individuals, businesses, and industry choices 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 has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in social/behavioral sciences. (F/SS)

#### ECO 252 Principles of Macroeconomics

**Prerequisite:** Preading Proficiency or RED 090

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 has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in social/behavioral sciences. (S/SS)

See the SEL and SEM prefixes for generic Selected Topics and Seminar course descriptions.

**Education**

**EDU 113 Family/Early Child Cred**

This course covers business/professional practices for family early childhood providers, developmentally appropriate practices, positive guidance, and methods of providing a safe and healthy environment. Topics include developmentally appropriate practices; health, safety and nutrition; and business and professionalism. Upon completion, students should be able to develop a handbook of policies, procedures, and practices for a family child care home. This course completes the sequence of courses necessary for obtaining the NC Child Care Certificate if registered home care is sought. (F)

**EDU 116 Intro to Education**

This course introduces the American educational system and the teaching profession. Topics include historical and philosophical foundations of education, contemporary educational trends and issues, curriculum development, and observation and participation in public school classrooms. Upon completion, students should be able to relate classroom observations to the roles of teachers and schools and the process of teacher education. (D)

**EDU 119 Early Childhood Ed**

This course covers the foundations of the education profession, types of programs, professionalism, and planning quality programs for children. Topics include historical foundations, career options, types of programs, professionalism, observational skills, and planning developmentally appropriate schedules, environments, and activities for children. Upon completion, students should be able to demonstrate observational skills, identify appropriate schedules and environments, develop activity plans, and describe influences on the profession. (D)

**EDU 131 Child, Family, and Community**

This course covers the relationships between the families, programs for children/schools, and the community. Emphasis is placed on establishing and maintaining positive collaborative relationships with families and community resources. Upon completion, students should be able to demonstrate strategies for effectively working with diverse families and identifying and utilizing community resources. (D)
EDU 144  Child Development I 3 0 3
Prerequisite:  Reading proficiency or RED 090
This course covers the theories of child development and the developmental sequences of children from conception through the pre-school years for early childhood educators. Emphasis is placed on sequences in physical/motor, social, emotional, cognitive, and language development and appropriate experiences for the young child. Upon completion, students should be able to identify developmental milestones, plan experiences to enhance development, and describe appropriate interaction techniques and environments for typical/atypical development. (F)

EDU 145  Child Development II 3 0 3
Prerequisite:  Reading proficiency or RED 090
This course covers theories of child development and developmental sequences of children from pre-school through middle childhood for early childhood educators. Emphasis is placed on characteristics of physical/motor, social, emotional, and cognitive/language development and appropriate experiences for children. Upon completion, students should be able to identify developmental characteristics, plan experiences to enhance development, and describe appropriate interaction techniques and environments. This course provides the student with a summary of the sequences of child development from birth through age eight years. (S)

EDU 146  Child Guidance 3 0 3
This course introduces practical principles and techniques for developmentally appropriate guidance. Emphasis is placed on encouraging self-esteem and cultural awareness, effective communication skills, and direct and indirect guidance techniques and strategies. Upon completion, students should be able to demonstrate strategies which encourage positive social interactions, promote conflict resolution, and develop self-control, self-motivation, and self-esteem in children. Students will demonstrate understanding of techniques for successfully managing a classroom, including arranging the environment, establishing limits, and facilitating smooth transitions. (F)

EDU 151  Creative Activities 3 0 3
This course covers creative learning environments, planning and implementing developmentally appropriate experiences, and developing appropriate teaching materials for the classroom. Emphasis is placed on creative activities for children in art, music, movement and physical skills, and dramatics. Upon completion, students should be able to select and evaluate developmentally appropriate learning materials and activities. (F)

EDU 153  Health, Safety, & Nutrition 3 0 3
This course focuses on promoting and maintaining the health and well-being of children. Topics include health and nutritional needs, safe and healthy environments, and recognition and reporting of child abuse and neglect. Upon completion, students should be able to set up and monitor safe indoor and outdoor environments and implement a nutrition education program. (S)
EDU 221      Children with Special Needs     3 0 3
Prerequisite: EDU 145 and 144 or PSY 244 and PSY 245
This course introduces working with children with special needs. Emphasis is placed on the characteristics and assessment of children and strategies for adapting the home and classroom environment. Upon completion, students should be able to recognize atypical development, make appropriate referrals, and work collaboratively to plan, implement, and evaluate inclusion strategies. (F)

EDU 235      School-Age Dev. & Prog.     2 0 2
This course presents developmentally appropriate practices in group care for school-age children. Topics include principles of development, environmental planning, and positive guidance techniques. Upon completion, students should be able to discuss developmental principles for children five to twelve years of age and plan and implement age-appropriate activities. (F)

EDU 251      Exploration Activities     3 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. (SS)

EDU 259      Curriculum Planning     3 0 3
Prerequisites: EDU 112 or 113 or EDU 119
This course covers early childhood curriculum planning. Topics include philosophy, curriculum, indoor and outdoor environmental design, scheduling, observation and assessment, and instructional planning and evaluation. Upon completion, students should be able to assess children and curriculum; plan for daily, weekly, and long-range instruction; and design environments with appropriate equipment and supplies. The teacher's role in facilitating children's learning within the classroom environment will also be included. (S)

EDU 261      Early Childhood Admin I     2 0 2
This course covers the policies, procedures, and responsibilities for the management of early childhood education programs. Topics include implementation of goals, principles of supervision, budgeting and financial management, and meeting the standards for a NC Child Day Care license. Upon completion, students should be able to develop program goals, explain licensing standards, determine budgeting needs, and describe effective methods of personnel supervision. (S)

EDU 262      Early Childhood Admin II     3 0 3
Prerequisite: EDU 261
This course provides a foundation for budgetary, financial, and personnel management of the child care center. Topics include budgeting, financial management, marketing, hiring, supervision, and professional development of a child care center. Upon completion, students should be able to formulate marketing, financial management,
and fund development plans and develop personnel policies, including supervision and staff development plans. (S)

EDU 282 Early Childhood Lit 3 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. Students will develop an understanding of the creation and use of children’s literature as a learning experience. (F)
See the SEL and SEM prefixes for generic Selected Topics and Seminar course descriptions.

EDU 288 Adv Issues/Early Child Ed 2 0 2
Corequisite: EDU 144 or EDU 145
This course covers advanced topics and issues in early childhood. Emphasis is placed on current advocacy issues, emerging technology, professional growth experiences, and other related topics. Upon completion, students should be able to list, discuss, and explain advanced current topics and issues in early childhood education. (F)
See the SEL and SEM prefixes for generic Selected Topics and Seminar course descriptions.

Electricity

ELC 112 DC/AC Electricity 3 6 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. (F)

ELC 113 Basic Wiring I 2 6 4
This course introduces the care/usage of tools and materials used in electrical installations and the requirements of the National Electrical Code. Topics include NEC, electrical safety, and electrical blueprint 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 basic electrical installations. (F)

ELC 114 Basic Wiring II 2 6 4
Prerequisite: ELC 113
This course provides additional instruction in the application of electrical tools, materials, and test equipment associated with electrical installations. Topics include the NEC; safety; electrical blueprints; planning, layout, and installation of equipment and conduits; and wiring devices such as panels and overcurrent devices. Upon completion, students should be able to properly install equipment and conduit associated with electrical installations. (S)
ELC 115 Industrial Wiring 2 6 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. (S)

ELC 117 Motors and Controls 2 6 4
Prerequisites: ELC 111, 112 or ELC 131
This course introduces the fundamental concepts of motors and motor controls. Topics include ladder diagrams, pilot devices, contractors, motor starters, motors, and other control devices. Upon completion, students should be able to properly select, connect, and troubleshoot motors and control circuits. (S)

ELC 118 National Electrical Code 1 2 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. (S)

ELC 125 Diagrams and Schematics 1 2 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. (F)

ELC 127 Software for Technicians 1 2 2
This course introduces computer software which can be used to solve electrical/electronics problems. Topics include electrical/electronics calculations, applications, and controls. Upon completion, students should be able to utilize a personal computer for electrical/electronics-related applications. (F)

ELC 128 Intro to PLC 2 3 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 install PLCs and create simple programs. (S)

ELC 131 DC/AC Circuit Analysis 4 3 5
Corequisite: MAT 121
This course introduces DC and AC electricity with an emphasis on circuit analysis, measurements, and operation of test equipment. Topics include DC and AC principles, circuit analysis laws and theorems, components, test equipment operation, circuit simulation software, and other related topics. Upon completion, students should be able to interpret circuit schematics; design, construct, verify, and analyze DC/AC circuits; and properly use test equipment. (F)
This course introduces the technical documentation that is typically found or used in the industrial environment. Topics include interpretation of service manuals, freehand sketching of lines, orthographic views and dimensions, and blueprint reading. Upon completion, students should be able to interpret technical documents and blueprints and use basic drafting skills to prepare usable field drawings. (F)

Prerequisites: ELC 112, ELC 131, or ELC 140
This course covers magnetic circuits, transformers, DC/AC generators, and a review of the three-phase circuit fundamentals including power factor. Topics include magnetic terms and calculations, transformer calculations based on primary or secondary equivalent circuits, and generator regulation and efficiency calculations. Upon completion, students should be able to perform regulation and efficiency calculations for DC/AC single- and three-phase transformer and generator circuits. (F/S)

Prerequisite: ELC 135
This course covers DC/AC motor fundamentals including applications and control. Topics include control devices, synchronous and induction single and polyphase AC motors, DC motors, stepper, and special purpose motors. Upon completion, students should be able to perform regulation and efficiency calculations for DC/AC single- and three-phase transformer and generator circuits. (F/S)

This course provides a survey of the world of electronic business. Topics include the definition of electronic business, current practices as they evolve using Internet strategy in business, and application of basic business principles to the world of E-commerce. Upon completion, students should be able to define electronic business and demonstrate an understanding of the benefits of E-commerce as a foundation for developing plans leading to electronic business implementation. (F)

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. (S)

This course builds on currently accepted business practices to develop a business plan and implementation model for E-Commerce. Topics include analysis and synthesis of the planning cycle, cost/benefit analysis, technical systems, marketing, security, financial support, Internet strategies, website design, customer support and feedback and
assessment. Upon completion, students should be able to develop a plan for E-Commerce in a small to medium size business. (F)

**ECM 230 Capstone Project**

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Prerequisite: ECM 220

This course provides experience in Electronic Commerce. Emphasis is placed on the implementation of an E-commerce model for an existing business. Upon completion, students should be able to successfully develop and implement a plan for E-Commerce in a small to medium size business. (S)

### Electronics

**ELN 131 Electronic Devices**

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Prerequisites: ELC 112, ELC 131, or ELC 140

This course includes semiconductor-based devices such as diodes, bipolar transistors, FETs, thyristors, and related components. Emphasis is placed on analysis, selection, biasing, and applications in power supplies, small signal amplifiers, and switching and control circuits. Upon completion, students should be able to construct, analyze, verify, and troubleshoot discrete component circuits using appropriate techniques and test equipment. (S)

**ELN 132 Linear IC Applications**

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Prerequisite: ELN 131 or BMT 113

This course introduces the characteristics and applications of linear integrated circuits. Topics include op-amp circuits, differential amplifiers, instrumentation amplifiers, waveform generators, active filters, PLLs, and IC voltage regulators. Upon completion, students should be able to construct, analyze, verify, and troubleshoot linear integrated circuits using appropriate techniques and test equipment. (F)

**ELN 133 Digital Electronics**

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This course covers combinational and sequential logic circuits. Topics include number systems, Boolean algebra, logic families, MSI and LSI circuits, AC/DC 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. (S)

**ELN 231 Industrial Controls**

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Prerequisite: ELC 112 or ELC 131 or ELC 140

This course introduces the fundamental concepts of solid-state control of rotating machinery and associated peripheral devices. Topics include rotating machine theory, ladder logic, electromechanical and solid state relays, motor controls, pilot devices, three-phase power systems, and other related topics. Upon completion, students should be able to interpret ladder diagrams and demonstrate an understanding of electromechanical and electronic control of rotating machinery. (S)

**ELN 232 Intro to Microprocessors**

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Prerequisite: ELN 133

This course introduces microprocessor architecture and microcomputer systems
including memory and input/output interfacing. Topics include assembly language programming, bus architecture, bus cycle types, 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. (F)

**ELN 233 Microprocessor Systems** 3 3 4
Prerequisite: ELN 232
This course covers the application and design of microprocessor control systems. Topics include control and interfacing of systems using AC/DC, serial/parallel I/O, communication protocols, and other related applications. Upon completion, students should be able to design, construct, program, verify, analyze, and troubleshoot fundamental microprocessor interface and control circuits using related equipment. (S)

**ELN 237 Local Area Networks** 2 3 3
Prerequisite: CIS 110 or CIS 111 or CET 111 or ELC 127
This course introduces the fundamentals of local area networks and their operation in business and computer environments. Topics include the characteristics of network topologies, system hardware (repeaters, bridges, routers, gateways), system configuration, and installation and administration of the LAN. Upon completion, students should be able to install, maintain, and manage a local area network. (S)

**ELN 275 Troubleshooting** 1 2 2
Corequisite: ELN 133 or ELN 141
This course covers techniques of analyzing and repairing failures in electronic equipment. Topics include safety, signal tracing, use of service manuals, and specific troubleshooting methods for analog, digital, and other electronics-based circuits and systems. Upon completion, students should be able to logically diagnose and isolate faults and perform necessary repairs to meet manufacturers’ specifications. (SS)

See the SEL and SEM prefixes for generic Selected Topics and Seminar course descriptions.

**Emergency Preparedness Technology**

**EMS 235 EMS Management** 2 0 2
This course stresses the principles of managing a modern emergency medical service system. Topics include structure and function of municipal governments, EMS grantmanship finance, regulatory agencies, system management legal issues, and other topics relevant to the EMS manager. Upon completion, students should be able to understand the principles of managing emergency medical service delivery systems. (S)

**EPT 120 Sociology of Disaster** 2 0 2
This course is designed to overview sociological disaster research, disaster systems, and alternative research approaches. Topics include human and organizational behaviors, long-term 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. (SS)
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<td>EPT 150</td>
<td>EMS Incident Management</td>
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<td>This course covers the fully integrated incident management system for EMS response to high impact incidents. Topics include mass casualty incidents, terrorist events, communications, training, triage, law and fire incident command. Upon completion, students should be able to implement and operate within the National Incident Management System. (F)</td>
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<td>EPT 210</td>
<td>Disaster Resp Ops &amp; Mgt.</td>
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<td>Prerequisite: FIP 236</td>
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<td>This course covers the basic concepts and operational procedures and authorities involved in responding to major disasters. Topics include Federal, State, and local roles and responsibilities in major disaster recovery work with an emphasis on governmental coordination. Upon completion, students should be able to implement a disaster plan and assess the needs of those involved in a major disaster. (S)</td>
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<td>EPT 220</td>
<td>Terrorism and Emer. Mgt.</td>
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<td>Prerequisite: EPT 210</td>
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<td>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. (SS)</td>
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<td>EPT 275</td>
<td>Emergency OPS Center Mgt.</td>
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<td>Prerequisite: FIP 236</td>
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<td>This course provides students with the knowledge and skills to effectively manage and operate an 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 conduct a competent fire investigation and present those findings to appropriate officials or equivalent, meeting NFPA 1021. (S)</td>
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<td>FIP 128</td>
<td>Detection &amp; Investigation</td>
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<td>This course covers procedures for determining the origin and cause of accidental and incendiary fires. 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. (SS)</td>
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<td>Inspections &amp; Codes</td>
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<td>This course covers the fundamentals of fire and building codes and procedures to conduct an inspection. 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 meeting NFPA 1021. (F)</td>
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<td>FIP 152</td>
<td>Fire Protection Law</td>
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<td>This course covers fire protection law. Topics include torts, 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. (F)</td>
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<td>OSHA Standards</td>
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<td>This course covers public and private sector OSHA work site requirements. Emphasis is placed on accident prevention and reporting, personal safety, machine operation, 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. (S)</td>
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<td>HazMat: Operations</td>
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<td>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. (S)</td>
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<td>FIP 228</td>
<td>Local Government Finance</td>
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<td>This course introduces local governmental financial principles and practices. Topics include budget preparation and justification, revenue policies, statutory requirements, taxation, audits, and the economic climate. Upon completion, students should be able to comprehend the importance of finance as it applies to the operation of a department. (S)</td>
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<td>FIP 236</td>
<td>Emergency Management</td>
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<td>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. (F)</td>
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<td>FIP 240</td>
<td>Fire Service Supervision</td>
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<td>This course covers fire protection systems in industrial facilities. Emphasis is placed on supervisory skills in the fire protection field. Upon completion, students should be able to state the responsibilities of supervisors that meet elements of NFPA 1021 for Fire Officer I and II. (F)</td>
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<td>FIP 256</td>
<td>Municipal Public Relations</td>
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<td>This course is a general survey of municipal public relations and their effect on the governmental process. 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 a able to manage the public relations functions of a fire service organization, which meets the elements of NFPA 1021 and Fire Officer I and II. (F)</td>
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FIP 276 Managing Fire Services 3 0 3
This course provides an overview of fire department operative services. 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, meeting NFPA 1021. (F)

Engineering

EGR 115 Introduction to Technology 2 6 4
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. (F)

EGR 220 Engineering Statics 3 0 3
Prerequisites: PHY 251
Corerequisite: MAT 272
This course introduces the concepts of engineering based on forces in equilibrium. Topics include concentrated forces, distributed forces, forces due to friction, and inertia as they apply to machines, structures, and systems. Upon completion, students should be able to solve problems which require the ability to analyze systems of forces in static equilibrium. This course has been approved to satisfy the Comprehensive Articulation Agreement pre-major and/or elective course requirement.

EGR 225 Engineering Dynamics 3 0 3
Prerequisites: EGR 220
Corerequisite: MAT 273
This course introduces the concepts of engineering based on the analysis of motion in Cartesian, cylindrical, and spherical coordinate systems. Topics include the two and three dimensional motion of particles and rigid bodies, the forces associated with that motion, and relative motion between two coordinate systems. Upon completion, students should be able to solve problems which require the ability to analyze the motion and forces involved in a dynamic system. This course has been approved to satisfy the Comprehensive Articulation Agreement pre-major and/or elective course requirement.

EGR 285 Design Project 0 4 2
This course provides the opportunity to design and construct an instructor-approved project using previously acquired skills. Emphasis is placed on selection, proposal, design, construction, testing, and documentation of the approved project. Upon completion, students should be able to present and demonstrate operational projects.
## English

Initial student placement in developmental courses is based on individual college placement testing policies and procedures. Students should begin developmental course work at the appropriate level indicated by the college’s placement test.

### ENG 075 Reading and Language Essentials 5 0 5
Prequisite: Appropriate score on either the reading or English placement test.
This course uses whole language to develop proficiency in basic reading and writing. Emphasis is placed on increasing vocabulary, developing comprehension skills, and improving grammar. Upon completion, students should be able to understand and create grammatically and syntactically correct sentences. This course integrates ENG 070 and RED 070. This course does not satisfy the developmental reading and writing prerequisite for ENG 111 and ENG 111A; this course is not eligible for Financial Aid assistance. (F)

### ENG 080 Writing Foundations 3 2 4
Prequisite: ENG 070 or ENG 075
This course introduces the writing process and stresses effective sentences. Emphasis is placed on applying the conventions of written English, reflecting standard usage and mechanics in structuring a variety of sentences. Upon completion, students should be able to write correct sentences and a unified, coherent paragraph. This course does not satisfy the developmental reading and writing prerequisite for ENG 111 or ENG 111A. (F/S)

### ENG 090 Composition Strategies 3 0 3
Prequisites: ENG 080 or ENG 085 or English Placement Score
Corequisite: ENG 090A
This course provides practice in the writing process and stresses effective paragraphs. Emphasis is placed on learning and applying the conventions of standard written English in developing paragraphs within the essay. Upon completion, students should be able to compose a variety of paragraphs and a unified, coherent essay. This course satisfies the developmental reading and writing prerequisite for ENG 111 and ENG 111A. (F/S/SS)

### ENG 090A Comp Strategies Lab 0 2 1
Prequisite: ENG 080 or English Placement Inventory
Corequisite: ENG 090
This writing lab is designed to practice the skills introduced in ENG 090. Emphasis is placed on learning and applying the conventions of standard written English in developing paragraphs within the essay. Upon completion, students should be able to compose a variety of paragraphs and a unified, coherent essay. (F/S/SS)

### ENG 102 Applied Comm II 3 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 effec-
tive, short, and job-related written and oral communications. This is a diploma-level course. (F/S)

**ENG 111**  Expository Writing  3  0  3
Prerequisites: ENG 090/090A and RED 090, or English Placement Inventory. All students enrolling in ENG 111 must demonstrate competency by achieving satisfactory scores on the CPT, SAT, ACT, or ENG 090 proficiency assessment.
Corequisite: ENG 111A
This course is the required first course in a series of two designed to develop the ability to produce clear expository prose. Emphasis is placed on the writing process including audience analysis, topic selection, thesis support and development, editing, and revision. Upon completion, students should be able to produce unified, coherent, well-developed essays using standard written English. This course also introduces students to the use of documentation and culminates in an argumentative research paper. This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in English composition. (F/S/SS)

**ENG 111A**  Expository Writing Lab  0  2  1
Prerequisites: ENG 090 and RED 090; or English Placement Scores
Corequisite: ENG 111
This writing laboratory is designed to apply the skills introduced in ENG 111. Emphasis is placed on the editing and revision components of the writing process. Upon completion, students should be able to apply those skills in the production of final drafts in ENG 111. (F/S/SS)

**ENG 112**  Argument-Based Research  3  0  3
Prerequisites: ENG 111 with at least a C and Reading proficiency or RED 090
This course, the second in a series of two, introduces research techniques, documentation styles, and argumentative strategies. Emphasis is placed on analyzing data and incorporating research findings into documented argumentative essays and research projects. Upon completion, students should be able to summarize, paraphrase, interpret, and synthesize information from primary and secondary sources using standard research format and style. This course also introduces the study of literature and culminates on the composition of literacy analysis papers. This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in English composition. (D)

**ENG 113**  Literature-Based Research  3  0  3
Prerequisites: ENG 111 with at least a C and Reading proficiency of RED 090
This course, the second in a series of two, expands the concepts developed in ENG 111 by focusing on writing that involves literature-based research and documentation. Emphasis is placed on critical reading and thinking and the analysis and interpretation of prose, poetry, and drama: plot, characterization, theme, cultural context, etc. Upon completion, students should be able to construct mechanically-sound, documented essays and research papers that analyze and respond to literary works. This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in English composition. (F/S/SS)
ENG 114  Prof Research & Reporting  3 0 3
Prerequisites: ENG 111 with at least a C and Reading proficiency or RED 090
This course, the second in a series of two, is designed to teach professional communi-
cation skills. Emphasis is placed on research, listening, critical reading and thinking,
analysis, interpretation, and design used in oral and written presentations. Upon com-
pletion, students should be able to work individually and collaboratively to produce
well-designed business and professional written and oral presentations. This course
has been approved to satisfy the Comprehensive Articulation Agreement
general education core requirement in English composition. (F/S)

ENG 125  Creative Writing I  3 0 3
Prerequisites: ENG 111 with at least a C and Reading proficiency or RED 090
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 crit-
tique the writing of others. (D)

ENG 231  American Literature I  3 0 3
Prerequisites: ENG 112, ENG 113, or ENG 114 and Reading proficiency or RED 090
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 inter-
pret, analyze, and respond to literary works in their historical and cultural contexts.
This course has been approved to satisfy the Comprehensive Articulation Agreement
general education core requirement in humanities/fine arts. (F)

ENG 232  American Literature II  3 0 3
Prerequisites: ENG 112, ENG 113, or ENG 114 and Reading proficiency or RED 090
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 inter-
pret, analyze, and respond to literary works in their historical and cultural contexts.
This course has been approved to satisfy the Comprehensive Articulation Agreement
general education core requirement in humanities/fine arts. (S)

ENG 241  British Literature I  3 0 3
Prerequisites: ENG 112, ENG 113, or ENG 114 and Reading proficiency or RED 090
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. This course has been approved to satisfy the Comprehensive
Articulation Agreement general education core requirement in humanities/fine arts. (F)

ENG 242  British Literature II  3 0 3
Prerequisites: ENG 112, ENG 113, or ENG 114 and Reading proficiency or RED 090
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. This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in humanities/fine arts. (S)

ENG 261 World Literature I 3 0 3
Prerequisites: ENG 112, ENG 113, or ENG 114 and Reading proficiency or RED 090
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. This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in humanities/fine arts.

ENG 262 World Literature II 3 0 3
Prerequisites: ENG 112, ENG 113, or ENG 114 and Reading proficiency or RED 090
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. This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in humanities/fine arts.

ENG 273 African-American Literature 3 0 3
Prerequisites: ENG 112, ENG 113, or ENG 114 and Reading proficiency or RED 090
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. (D)
See the SEL and SEM prefixes for generic Selected Topics and Seminar course descriptions.

Geography

GEO 111 World Regional Geography 3 0 3
Prerequisite: Reading proficiency or RED 090
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. This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in social/behavioral sciences. (D)
**GEO 130  General Physical Geography**  3  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. This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in social/behavioral sciences. (D) See the SEL and SEM prefixes for generic Selected Topics and Seminar course descriptions.

**Health**

**HEA 110  Personal Health/Wellness**  3  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. (F)

**HEA 112  First Aid and CPR**  1  2  2
This course introduces the basics of emergency first aid treatment. Topics include rescue breathing, CPR, first aid for choking and bleeding, and other first aid procedures. Upon completion, students should be able to demonstrate skills in providing emergency care for the sick and injured until medical help can be obtained. (F)

**HEA 120  Community Health**  3  0  3
This course provides information about contemporary community health and school hygiene issues. Topics include health education and current information about health trends. Upon completion, students should be able to recognize and devise strategies to prevent today's community health problems. (F)

**Health Sciences**

**HSC 120  CPR**  0  2  1
This course covers the basic knowledge and skills for the performance of infant, child, and adult CPR and the management of foreign body airway obstruction. Emphasis is placed on recognition, assessment, and proper management of emergency care. Upon completion, students should be able to perform infant, child, and adult CPR and manage foreign body airway obstructions. (F/S/SS) See the SEL and SEM prefixes for generic Selected Topics and Seminar course descriptions.

**Heavy Equipment & Transport Technology**

**HET 110  Diesel Engines**  3  9  6
This course introduces theory, design, terminology, and operating adjustments for diesel engine technology, including diesel fuel systems, engine components, and their applications.
engines. Emphasis is placed on safety, theory of operation, inspection, measuring, and rebuilding diesel engines according to factory specifications. Upon completion, students should be able to measure, diagnose problems, and repair diesel engines. (F)

**HET 112 Diesel Electrical Systems** 3 6 5
This course introduces electrical theory and applications as they relate to diesel powered equipment. Topics include lighting, accessories, safety, starting, charging, instrumentation, and gauges. Upon completion, students should be able to follow schematics to identify, repair, and test electrical circuits and components. (S)

**HET 114 Power Trains** 3 6 5
This course introduces power transmission devices. Topics include function and operation of gears, chains, clutches, planetary gears, drive lines, differentials, and transmissions. Upon completion, students should be able to identify, research specifications, repair, and adjust power train components. (S)

**HET 115 Electronic Engines** 2 3 3
This course introduces the principles of electronically controlled diesel engines. Emphasis is placed on testing and adjusting diesel engines in accordance with manufacturers’ specifications. Upon completion, students should be able to diagnose, test, and calibrate electronically controlled diesel engines. (SS)

**HET 116 Air Condit./Diesel Equip.** 1 2 2
This course provides a study of the design, theory, and operation of heating and air conditioning systems in newer models of medium and heavy duty vehicles. Topics include component function, refrigerant recovery, and environmental regulations. Upon completion, students should be able to use proper techniques and equipment to diagnose and repair heating/air-conditioning systems according to industry standards. (S)

**HET 118 Mechanical Orientation** 2 0 2
This course introduces the care and safe use of power and hand tools. Topics include micrometers, dial indicators, torque wrenches, drills, taps dies, screw extractors, thread restorers, and fasteners. Upon completion, students should be able to select and properly use tools for various operations. (F)

**HET 125 Preventive Maintenance** 1 3 2
This course introduces preventive maintenance practices used on medium and heavy duty vehicles and rolling assemblies. Topics include preventive maintenance schedules, services, DOT rules and regulations, and road ability. Upon completion, students should be able to set and follow a preventive maintenance schedule as directed by manufacturers. (F)

**HET 134 Mechanical Fuel Injection** 2 2 3
This course introduces the principles of mechanical fuel injection. Emphasis is placed on test equipment, component functions, and theory. Upon completion, students should be able to diagnose, service, and repair fuel systems and governors. (F)
**HET 233 Suspension and Steering**

This course introduces the theory and principles of medium and heavy duty steering and suspension systems. Topics include wheel and tire problems, frame members, fifth wheel, bearings, and coupling systems. Upon completion, students should be able to troubleshoot, adjust, and repair suspension and steering components on medium and heavy duty vehicles. (S)

**History**

**HIS 111 World Civilizations I**

Prerequisite: ENG 090/090A and RED 090 or Reading proficiency

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 ends with the conclusion of the Thirty Years' War in 1648. This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in social/behavioral sciences. (F/S)

**HIS 112 World Civilizations II**

Prerequisite: ENG 090/090A and RED 090 or Reading proficiency

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 begins with the end of the Thirty Years' War in 1648. This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in social/behavioral sciences. (F/S)

**HIS 121 Western Civilization I**

Prerequisite: ENG 090/090A and RED 090 or Reading proficiency

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. This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in social/behavioral sciences.

**HIS 122 Western Civilization II**

Prerequisite: ENG 090/090A and RED 090 or Reading proficiency

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. This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in social/behavioral sciences.
HIS 131 American History I 3 0 3
Prerequisite: ENG 090/090A and RED 090 or Reading proficiency
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 has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in social/behavioral sciences. (F)

HIS 132 American History II 3 0 3
Prerequisite: ENG 090/090A and RED 090 or Reading proficiency
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 begins with the end of Reconstruction. This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in social/behavioral sciences. (S)

HIS 236 North Carolina History 3 0 3
Prerequisite: ENG 090/090A and RED 090 or Reading proficiency
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. (S) See the SEL and SEM prefixes for generic Selected Topics and Seminar course descriptions.

Horticulture

HOR 112 Landscape Design I 2 3 3
This course covers landscape principles and practices for residential and commercial sites. Emphasis is placed on drafting, site analysis, and common elements of good design, plant material selection, and proper plant utilization. Upon completion, students should be able to read, plan, and draft a landscape design.

HOR 114 Landscape Construction 2 2 3
This course introduces the design and fabrication of landscape structures/features. Emphasis is placed on safety, tool identification and use, material selection, construction techniques, and fabrication. Upon completion, students should be able to design and construct common landscape structures/features.

HOR 134 Greenhouse Operations 2 2 3
This course covers the principles and procedures involved in the operation and maintenance of greenhouse facilities. Emphasis is placed on the operation of greenhouse
systems, including the environmental control, record keeping, scheduling, and production practices. Upon completion, students should be able to demonstrate the ability to operate greenhouse systems and facilities to produce greenhouse crops.

**HOR 160 Plant Materials I**  
2 2 3

This course covers identification, culture, characteristics, and use of plants. Emphasis is placed on nomenclature, identification, growth requirements, cultural requirements, soil preferences, and landscape applications. Upon completion, students should be able to demonstrate knowledge of the proper selection and utilization of plant materials.

**HOR 162 Applied Plant Science**  
2 2 3

This course introduces the basic concepts of botany as they apply to horticulture. Topics include nomenclature, physiology, morphology, and anatomy as they apply to plant culture. Upon completion, students should be able to apply the basic principles of botany to horticulture.

**HOR 164 Horticulture Pest Management**  
2 2 3

This course covers the identification and control of plant pests including insects, diseases, and weeds. Topics include pest identification and chemical regulations, safety, and pesticide application. Upon completion, students should be able to meet the requirements for North Carolina Commercial Pesticide Ground Applicators License.

**HOR 166 Soils & Fertilizers**  
2 2 3

This course covers the physical and chemical properties of soils and soil fertility and management. Topics include soil formation, classification, physical and chemical properties, testing, fertilizer application, and other amendments. Upon completion, students should be able to analyze, evaluate, and properly amend soils/media.

**HOR 168 Plant Propagation**  
2 2 3

This course is a study of sexual and asexual reproduction of plants. Emphasis is placed on seed propagation, grafting, stem and root propagation, micro-propagation, and other propagation techniques. Upon completion, students should be able to successfully propagate ornamental plants.

**HOR 213 Landscape Design II**  
2 2 3

Prerequisites: HOR 112

This course covers residential and commercial landscape design, cost analysis, and installation. Emphasis is placed on job cost estimates, installation of the landscape design, and maintenance techniques. Upon completion, students should be able to read landscape design blueprints, develop cost estimates, and implement the design.

**HOR 215 Landscape Irrigation**  
2 2 3

This course introduces basic irrigation design, layout, and installation. Topics include site analysis, components of irrigation systems, safety, types of irrigation systems, and installation techniques. Upon completion, students should be able to design and install basic landscape irrigation systems.
HOR 225   Nursery Production   2   3   3
This course covers all aspects of nursery crop production. Emphasis is placed on field production and covers soils, nutrition, irrigation, pest control, and harvesting. Upon completion, students should be able to produce a marketable nursery crop.

HOR 257   Arboriculture Practices   1   3   2
Prerequisite: HOR 160
This course covers the culture and maintenance of trees and shrubs. Topics include fertilization, pruning, approved climbing techniques, students should be able to properly prune trees and shrubs and perform arboricultural practices.

HOR 260   Plant Materials II   2   2   3
This course covers important landscape plants. Emphasis is placed on identification, plant nomenclature, growth characteristics, culture requirements and landscape uses. Upon completion, students should be able to demonstrate knowledge of the proper selection and utilization of plant materials.

HOR 265   Advanced Plant Materials   1   2   2
This course covers important landscape plants. Emphasis is placed on identification, plant nomenclature, growth characteristics, culture requirements, and landscape uses. Upon completion, students should be able to correctly select plants for specific landscape uses.

Humanities

HUM 120   Cultural Studies   3   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. This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirements in humanities/fine arts. (D)

HUM 122   Southern Culture   3   0   3
Prerequisite: Reading proficiency or RED 090
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. Special emphasis will be placed on applying these topics to the history, economic development, and culture of Southern Appalachia. This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in humanities/fine arts. (F/S)

HUM 130   Myth in Human Culture   3   0   3
Prerequisite: Reading proficiency or RED 090
This course provides an in-depth study of myths and legends. Topics include the var-
ied 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. The course also explores the ways in which myth, ritual, and individual psychological transformation work to shape personal identity in modern life. This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in humanities/fine arts. (D)

**HUM 150 American Women's Studies**  
3 0 3  
Prerequisite: Reading proficiency or RED 090  
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. This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in humanities/fine arts. (D)

**HUM 160 Introduction to Film**  
2 2 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. See the SEL and SEM prefixes for generic Selected Topics and Seminar course descriptions.

**Hydraulics**

**HYD 110 Hydraulics/Pneumatics I**  
2 3 3  
This course introduces the basic components and functions of hydraulic and pneumatic systems. Topics include standard symbols, pumps, control valves, control assemblies, actuators, FRL, maintenance procedures, and switching and control devices. Upon completion, students should be able to understand the operation of a fluid power system, including design, application, and troubleshooting. (S)

**HYD 112 Hydraulics/Med/Heavy Duty**  
1 2 2  
This course introduces hydraulic theory and applications as applied to mobile equipment. Topics include component studies such as pumps, motors, valves, cylinders, filters, reservoirs, lines, and fittings. Upon completion, students should be able to identify, diagnose, test, and repair hydraulic systems using schematics and technical manuals. (SS)

**HYD 121 Hydraulics/Pneumatics II**  
1 3 2  
Prerequisite: HYD 110  
This course is a continuation of HYD 110 and provides further investigation into fluid power systems. Topics include advanced system components, troubleshooting, and other related topics. Upon completion, students should be able to demonstrate an
understanding of the installation, operation, and maintenance of fluid power components and systems. (S) See the SEL and SEM prefixes for generic Selected Topics and Seminar course descriptions.

**Industrial Science**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>ISC 112</td>
<td>Industrial Safety</td>
<td>2 0 2</td>
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<tr>
<td>ISC 128</td>
<td>Industrial Leadership</td>
<td>2 0 2</td>
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<tr>
<td>ISC 131</td>
<td>Quality Management</td>
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<td>ISC 132</td>
<td>Mfg Quality Control</td>
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<tr>
<td>ISC 135</td>
<td>Principles of Industrial Mgmt</td>
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<tr>
<td>ISC 136</td>
<td>Productivity Analysis I</td>
<td>2 3 3</td>
</tr>
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</table>

This course introduces the principles of industrial safety. Emphasis is placed on industrial safety and OSHA and environmental regulations. Upon completion, students should be able to demonstrate knowledge of a safe working environment. (S)

This course introduces principles and techniques for managers in modern industry. Topics include leadership traits, management principles and processes, managing conflict, group dynamics, team building, counseling, motivation, and communication. Upon completion, students should be able to understand and apply leadership and management principles in work situations. (F)

This course provides a study and analysis of the aspects and implications of quality management that lead to customer satisfaction through continuous quality improvement. Topics include Total Quality Management, ISO 9000, organizing for quality, supplier/vendor relationships, and the role of leadership in quality management. Upon completion, students should be able to demonstrate an understanding of quality management concepts and techniques. (SS) See the SEL and SEM prefixes for generic Selected Topics and Seminar course descriptions.

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. (S)

This course covers the managerial principles and practices required for organizations to succeed in modern industry. Topics include the functions and roles of all levels of management, organization design, and planning and control of manufacturing operations. Upon completion, students should be able to demonstrate an understanding of management principles and integrate these principles into job situations. (F)

This course covers modern methods of improving productivity. Topics include traditional motion economy, methods analysis, time standards, process analysis, cycle time management, and human factors/ergonomics. Upon completion, students should be able to demonstrate an understanding of productivity concepts and apply productivity improvement techniques to work situations. (S)
ISC 141  Prod Activity Control  3  0  3
This course covers a broad base of production operations in a wide variety of production environments. Emphasis is placed on the principles, approaches, and techniques needed to schedule, control, measure, and evaluate the effectiveness of production operations. Upon completion, students should be able to demonstrate an understanding of production activity control and be prepared for the APICS CPIM examination. (D)

ISC 153  Motion & Time Study  2  3  3
This course covers the principles of motion and time study including practice in time study using a stop watch. Emphasis is placed on the principles of motion economy, performance rating, allowances, and development of standards. Upon completion, students should be able to perform motion and time study, MTM analysis, and working sampling studies. (D)

ISC 215  Job Analysis and Evaluation  3  0  3
This course includes techniques necessary to gather facts about specific operations and responsibilities of the job, identify methods improvement, and facilitate performance evaluation. Emphasis is placed on what the job entails including mental abilities, job skills, and physical requirements, as well as job improvement and performance evaluation methods. Upon completion, students should be able to demonstrate an understanding of job analysis and evaluation methods. (D)

ISC 225  Facility Layout  3  2  4
This course provides a practical study of facility planning with emphasis on 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. (D)

ISC 233  Industrial Org and Mgmt.  3  0  3
Prerequisites: ISC 133 or ISC 128
This course covers advanced organization and management philosophies for organization improvement. Emphasis is placed on understanding comprehensive organization improvement concepts such as reengineering, MBQA, ISO 9000, and teams. Upon completion, students should be able to demonstrate an understanding of organizations and assess their strengths and weaknesses. (F)

Information Systems

CIS 110  Introduction to Computers  2  2  3
This course provides an introduction to computers and computing. Topics include the impact of computers on society, ethical issues, and hardware/software applications, including spreadsheets, databases, word processors, graphics, the Internet, and operating systems. Upon completion, students should be able to demonstrate an understanding of the role and function of computers and use the computer to solve problems. (F/S/SS)
CIS 111  Basic PC Literacy  1  2  2
This course provides a brief overview of computer concepts. Emphasis is placed on the use of personal computers and software applications for personal and workplace use. Upon completion, students should be able to demonstrate basic personal computer skills. This course is intended for those who have not received credit for CIS 110. (F/S/SS)

CIS 113  Computer Basics  0  2  1
This course introduces basic computer usage for non-computer majors. Emphasis is placed on developing basic personal computer skills. Upon completion, students should be able to demonstrate competence in basic computer applications sufficient to use computer-assisted instructional software. (F/S/SS)

CIS 115  Intro to Prog and Logic  2  2  3
Prerequisite: MAT 070
This course introduces computer programming and problem solving in a programming environment, including an introduction to operating systems, text editor, and a language translator. 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. (F)

CIS 120  Spreadsheet I  2  2  3
Prerequisite: CIS 110 or CIS 111 or OST 137
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. (F/S)

CIS 125  CORE Integrated Software  2  2  3
Prerequisite: CIS 120 and CIS 152
This course instructs the student in the CORE Windows or Linux based program suites for word-processing, spreadsheet, database, and presentation software. Emphasis is placed on CORE level development of database, spreadsheet, word-processing, and presentation applications to utilize data sharing. Upon completion, each student will demonstrate competencies using business simulations which employ data sharing among the database, spreadsheet, word-processing, and presentation software. (F)

CIS 130  Survey of Operating Systems  2  3  3
Prerequisite: CIS 110 or Instructor Approval
The course covers operating system concepts which are necessary for maintaining and using computer systems. Topics include disk, file, and directory structures; installation and setup; resource allocation, optimization, and configuration; system security; and other related topics. Upon completion, students should be able to install and configure operating systems and optimize performance. (S)
CIS 135  PC Diagnostics/Configuration  2  2  3  
Prerequisite: CIS 110 or 111  
This course covers personal computer hardware including identification, installations, diagnostics, and repair. Topics include component/bus identification, safety procedures, hardware/software installation and configuration, diagnosing and replacing field replaceable units including memory and storage devices. Upon completion students should be able to identify, install, upgrade, maintain, diagnose and repair/replace basic microcomputer components. (F)

CIS 152  Database Concepts & Apps  2  2  3  
Prerequisites: CIS 110, or 111, or 115  
This course introduces database design and creation using a DBMS product. Topics include database terminology, usage in industry, design theory, types of DBMS models, and creation of simple tables, queries, reports, and forms. Upon completion, students should be able to create simple database tables, queries, reports, and forms which follow acceptable design practices. (S)

CIS 169  Business Presentations  1  2  2  
Prerequisite: CIS 110 or 111  
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 and graphics. Upon completion, students should be able to design and demonstrate an effective presentation. (SS)

CIS 172  Intro to the Internet  2  3  3  
This course introduces the various navigational tools and services of the Internet. Topics include using Internet protocols, search engines, file compression/decompression, FTP, e-mail, listservers, and other related topics. Upon completion, students should be able to use Internet resources, retrieve/decompress files, and use e-mail, FTP, and other Internet tools. (F)

CIS 174  Network Systems Manager I  2  2  3  
This course covers effective network management. Topics include network file system design and security, login scripts and user menus, printing services, e-mail, and backup. Upon completion, students should be able to administer an office network system. (F)

CIS 175  Network Management I  2  2  3  
This course covers fundamental network administration and system management. Topics include accessing and configuring basic network services, managing directory services, and using network management software. Upon completion, students should be able to apply system administrator skills in developing a network management strategy. (F)

CIS 217  Computer Training & Support  2  2  3  
Prerequisite: CIS 125 and CIS 135  
This course introduces computer training and support techniques. Topics include meth-
ods of adult learning, training design, delivery, and evaluation, creating documentation, and user support methods. Upon completion, students should be able to design and implement training and provide continued support for computer users. (S)

**CIS 235  Adv. PC Diagnostic/Config.**  
Prerequisite: CIS 215 or CIS 133  
A continuation of CIS 135, this course covers upgrading and repairing personal computers and peripherals. Topics include configuring and troubleshooting peripherals, installing device drivers, resolving resource conflicts, configuring and optimizing operating systems, and related topics. Upon completion, students should be able to install peripherals and upgrade personal computers components, diagnose problems, resolve resource conflict, and optimize system performance. (S)

**CIS 244  Operating System-AS/400**  
This course includes operating systems concepts for AS/400 systems. Topics include hardware management, file and memory management, system configuration/optimization, utilities, Job Control Language, and support functions. Upon completion, students should be able to perform operating system functions in an AS/400 environment. (S)

**CIS 246  Operating System - UNIX**  
This course includes operating systems concepts for UNIX operating systems. Topics include hardware management, file and memory management, system configuration/optimization, utilities and other related topics. Upon completion, students should be able to effectively use the UNIX operating system and its utilities. (S)

**CIS 274  Network Systems Manager II**  
Prerequisite: CIS 174  
This course is a continuation of CIS 174 focusing on advanced network management, configuration, and installation. Emphasis is placed on server configuration files, start-up procedures, server protocol support, memory and performance concepts, and management and maintenance. Upon completion, students should be able to install and upgrade networks and servers for optimal performance. (S)

**CIS 275  Network Management II**  
Prerequisite: CIS 175  
This course is a continuation of CIS 175 focusing on advanced enterprise networks. Topics include directory service tree planning, management distribution and protection, improving network security, auditing the network, printing, networking, and system administration of an Internet node. Upon completion, students should be able to manage client services and network features and optimize network performance. (S)

**CIS 286  Systems Analysis & Design**  
Prerequisite: CIS 115  
This course examines established and evolving methodologies for the analysis, design, and development of a business information system. Emphasis is placed on business
systems characteristics, managing information systems projects, prototyping, CASE 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. (F)

CIS 287     Network Support  2   2   3
Prerequisite: CIS 274 or CIS 275
This course provides experience using CD ROM and on-line research tools and hands-on experience for advanced hardware support and troubleshooting. Emphasis is placed on troubleshooting network adapter cards and cabling, network storage devices, the DOS workstation, and network printing. Upon completion, students should be able to analyze, diagnose, research, and fix network hardware problems. (S)

CIS 288     Systems Project  1   4   3
Prerequisite: CIS 227 or CIS 286
This course provides an opportunity to complete a significant systems 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. (S)

International Business

INT 110     International Business  3   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. (D)
See the SEL and SEM prefixes for generic Selected Topics and Seminar course descriptions.

Internet Technologies

ITN 130     Web Site Management  2   2   3
This course covers the issues involved in web site architecture. Topics include operating system directory structures, web site structural design, web site navigation, web site maintenance, backup and security. Upon completion, students should be able to design a web site director plan optimized for navigation and ease of maintenance. (F)

ITN 140     Web Development Tools  2   2   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. (S)

ITN 150     Internet Protocols  2   2   3
This course introduces the student to the application protocols used on the Internet. Topics include HTTP, Secure HTTP, TCP/IP, and related applications such as FTP, TELNET, and PING. Upon completion, students should be able to use the protocols as they pertain to the Internet, as well as setup and maintain these protocols. (S)

ITN 160 Principles of Web Design 2 2 3
This course introduces intermediate to advanced web page design techniques. Topics include effective use of graphics, fonts, colors, navigation tools, advanced markup language elements, as well as a study of bad design techniques. Upon completion, the student should be able to employ advanced design techniques to create high impact and highly functional web pages. (F)

ITN 170 Intro to Internet Database 2 2 3
This is the first of two courses introducing the use of databases to store, retrieve and query data through HTML forms. Topics include database design for Internet databases, use of ODBC-compliant databases. Upon completion, students should be able to create and maintain a database that will collect, query and report on data via an HTML form. (F)

ITN 230 Intranets 2 2 3
Prerequisites: ITN 130
This course covers the setting up of Intranets. Topics include selection of server hardware and software, selection of client applications, security, conversion of existing data to Web based formats, Intranet applications and administration. Upon completion, students should be able to setup a corporate or institutional Intranet. (S)

ITN 240 Internet Security 2 2 3
This course covers security issues related to Internet services. Topics include the operating system and Internet service security mechanisms. Upon completion, students should be able to implement security procedures for operating system level and server level alerts. (S)

ITN 260 Intro to E-Commerce 2 2 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. (S)

Landscape Gardening

LSG 111 Basic Landscape Technique 2 0 2
This course introduces basic principles essential to landscape gardening. Topics include soils, propagation, watering, fertilizing, pruning, pest control, and planting. Upon completion, students should be able to perform basic gardening techniques essential to maintaining a landscape.
LSG 121 Fall Gardening Lab 0 6 2
This course provides basic hands-on experience in fall gardening techniques. Emphasis is placed on pruning, irrigation, planting, fertilizing, pest control, equipment operation, and turf maintenance. Upon completion, students should be able to perform various techniques essential to maintaining the fall landscape.

LSG 122 Spring Gardening Lab 0 6 2
This course provides familiarization with basic gardening techniques by performing practical hands-on exercises required for the spring season. Emphasis is placed on pruning, irrigation, planting, fertilizing, pest control, equipment operation, turf maintenance, and landscape construction. Upon completion, students should be able to satisfactorily perform various practices essential to maintaining the landscape in the spring season.

LSG 123 Summer Gardening lab 0 6 2
This course provides basic hands-on experience in summer gardening techniques. Emphasis is placed on pruning, irrigation, planting, fertilizing, pest control, equipment operation, turf maintenance, landscape construction, and maintaining fruits and vegetables. Upon completion, students should be able to perform various techniques essential to maintaining the summer landscape.

LSG 231 Landscape Supervision 2 6 4
Prerequisites: LSG 123 and HOR 260
This course provides experience in planning, implementing, and supervising various landscape management projects. Emphasis is placed on supervisory skills, organizing, and scheduling. Upon completion, students should be able to supervise employees in various landscape management jobs.

LSG 232 Garden Management 1 2 2
Prerequisites: LSG 123 and HOR 260
This course covers the implementation of knowledge gained in previous landscape gardening courses. Emphasis is placed on scheduling, designing, renovation, and plant management. Upon completion, students should be able to collate the material learned in the Landscape Grdening curriculum and apply it to various landscape gardening situations.

TRF 110 Intro Turfgrass Cult & ID 3 2 4
This course provides an in-depth study of turfgrass. Topics include principles of reproduction, growth development, species characteristics, establishment and maintenance of golf courses and sports fields, and lawn applications. Upon completion, students should be able to identify turfgrass species through characteristics and reproductive stages and develop an establishment and maintenance plan for high quality turf areas.
Legal Education

LEX 110 Intro to Paralegal Study 2 0 2
This course introduces the paralegal profession and the legal system and an emphasis is placed on the role of professional and legal ethics. Topics include regulation, ethics, case analysis, legal reasoning, career opportunities, professional organizations, terminology and other related topics. Upon completion, the student should be able to understand the role of a paralegal and identify the skills, knowledge and ethics required of paralegals. (F)

LEX 120 Legal Research/Writing I 2 2 3
This course introduces the techniques of legal research and writing. Emphasis is placed on locating, analyzing, applying, and updating sources of law; effective legal writing, including proper citation; and the use of electronic research methods. Upon completion, students should be able to perform legal research and writing assignments using techniques covered in the course. (F)

LEX 121 Legal Research/Writing II 2 2 3
Prerequisite: LEX 120
This course covers advanced topics in legal research and writing. Topics include more complex legal issues and assignments involving preparation of legal memos, briefs, and other documents and the advanced use of electronic research methods. Upon completion, students should be able to perform legal research and writing assignments using techniques covered in the course. (S)

LEX 130 Civil Injuries 3 0 3
This course covers traditional tort concepts and the evolving body of individual rights created by statute. Topics include intentional and non-intentional torts with emphasis on negligence, strict liability, civil rights, workplace and environmental liability, remedies, and damages. Upon completion, students should be able to recognize, explain, and evaluate elements of civil injuries and related defenses. (F)

LEX 140 Civil Litigations I 3 0 3
This course introduces the structure of the legal system and the rules governing civil litigation. Topics include jurisdiction, state and federal rules of civil procedure and evidence. Upon completion, students should be able to assist an attorney in pre-litigation matters and the preparation of pleadings and motions. (S)

LEX 150 Commercial Law 2 2 3
This course covers legally enforceable agreements, forms of organization, and selected portions of the Uniform Commercial Code. Topics include drafting and enforcement of contracts, leases, and related documents and selection and implementation of business organization forms, sales, and commercial papers. Upon completion, students should be able to apply the elements of a contract, prepare various business documents, and understand the role of commercial paper. (F)
LEX 160  Criminal Law & Procedure  2  2  3
This course introduces substantive criminal law and procedural rights of the accused. Topics include elements of state/federal crimes, defenses, constitutional issues, pre-trial and trial process, and other related topics. Upon completion, students should be able to explain elements of specific crimes and assist an attorney in preparing a criminal case. (F)

LEX 210  Real Property I  3  0  3
This course introduces the study of real property law. Topics include the distinction between real and personal property, various estates, mechanics of conveyance and encumbrance, recordation, special proceedings, and other related topics. Upon completion, students should be able to identify estates, forms of deeds, requirements for recording, and procedures to enforce rights to real property. (S)

LEX 211  Real Property II  1  4  3
Prerequisite: LEX 210
This course continues the study of real property law relating to title examination and preparation of closing documents. Topics include use of courthouse and other public records in title examination and preparation of documents required in real estate transactions and closings. Upon completion, students should be able to plot/draft a description, perform complete title examination, draft closing documents including title insurance forms, and prepare disbursement reconciliation. (SS)

LEX 240  Family Law  3  0  3
This course covers laws governing domestic relations. Topics include marriage, separation, divorce, child custody, support, property division, adoption, domestic violence, and other related topics. Upon completion, students should be able to interview clients, gather information, and draft documents related to family law. (S)

LEX 250  Wills, Estates, and Trusts  2  2  3
This course covers various types of wills, trusts, probate, estate administration, and intestacy. Topics include types of wills and execution requirements, caveats and dissents, intestate succession, inventories and accounting, distribution and settlement, and other related topics. Upon completion, students should be able to draft simple wills, prepare estate forms, understand administration of estates including taxation, and explain terms regarding trusts. (S)

Machining

MAC 111  Machining Technology I  2  12  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. (F)
MAC 111 A  Machining Tech I  1   6   3
MAC 111 B  Machining Tech I  1   6   3
MAC 112  Machining Tech II  2   12  6
Prerequisite: MAC 111
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. (S)

MAC 112 A  Machining Tech II  1   6   3
MAC 112 B  Machining Tech II  1   6   3
MAC 113  Machining Tech III  2   12  6
Prerequisite: MAC 112
This course provides an introduction to advanced and special machining operations. Emphasis is placed on working to specified tolerances with special and advanced setups. Upon completion, students should be able to produce a part to specifications. (SS)

MAC 113A  Machining Tech III  1   6   3
MAC 113B  Machining Tech III  1   6   3
MAC 121  Intro to CNC  2   0   2
This course introduces the concepts and capabilities of computer numerical control machine tools. Topics include setup, operation, and basic applications. Upon completion, students should be able to explain operator safety, machine protection, data input, program preparation, and program storage. (F)

MAC 122  CNC Turning  1   3   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. (S)

MAC 124  CNC Milling  1   3   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. (S)

MAC 151  Machining Calculations  1   2   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. (F)
MAC 153    Compound Angles       1  2  2
This course introduces the application of basic types and uses of compound angles. Emphasis is placed on problem solving by tilting and rotating adjacent angles to resolve an unknown compound angle. Upon completion, students should be able to set up and develop compound angles on parts using problem-solving techniques. This course is a unique concentration requirement of the Tool, Die, and Mold Making concentration in the Machining Technology program. (SS)

MAC 222    Advanced CNC Turning   1  3  2
Prerequisite: MAC 122
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. (S)

MAC 224    Advanced CNC Milling   1  3  2
Prerequisite: MAC 124
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. (SS)

MAC 229    CNC Programming        2  0  2
Prerequisites: MAC 121, 122, 124, or 226
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. (F)

MAC 241    Jigs & Fixtures I      2  6  4
Prerequisite: MAC 112
This course introduces the application and use of jigs and fixtures. Emphasis is placed on design and manufacture of simple jigs and fixtures. Upon completion, students should be able to design and build simple jigs and fixtures. (S)

MAC 242    Jigs and Fixtures II   1  9  4
Prerequisite: MAC 241
This course provides continued study in the application of jigs and fixtures. Emphasis is placed on design and manufacture of complex jigs and fixtures. Upon completion, students should be able to design and build complex jigs and fixtures. (SS)

MAC 243    Die Making I          2  6  4
Prerequisite: MAC 112
This course introduces the principles and applications of die making. Topics include types, construction, and application of dies. Upon completion, students should be able to design and build simple dies. (F)
MAC 244     Die Making II     1     9     4
Prerequisite: MAC 243
This course provides continued study in the application and use of dies. Emphasis is placed on the design and manufacturing of complex dies. Upon completion, students should be able to design and build complex dies. (S)

MAC 245     Mold Construction I     2     6     4
Prerequisite: MAC 112
This course introduces the principles of mold making. Topics include types, construction, and application of molds. Upon completion, students should be able to design and build simple molds. (F)

MAC 246     Mold Construction II     1     9     4
Prerequisite: MAC 245
This course provides continued study in the application and use of molds. Emphasis is placed on design and manufacturing of complex molds. Upon completion, students should be able to design and build complex molds. (S)

See the SEL and SEM prefixes for generic Selected Topics and Seminar course descriptions.

Maintenance

MNT 110     Intro to Maint Procedures     1     3     2
This course covers basic maintenance fundamentals for power transmission equipment. Topics include equipment inspection, lubrication, alignment, and other scheduled maintenance procedures. Upon completion, students should be able to demonstrate knowledge of accepted maintenance procedures and practices according to current industry standards. (F)

MNT 111     Maintenance Practices     2     2     3
This course provides in-depth theory and practical applications relating to predictive and preventive maintenance programs. Emphasis is placed on equipment failure analysis, maintenance management software, and techniques such as vibration and infrared analysis. Upon completion, students should be able to demonstrate an understanding of modern analytical and documentation methods. (S)

MNT 220     Rigging & Moving     1     3     2
This course covers the principles of safe rigging practices for handling, placing, installing, and moving heavy machinery and equipment. Topics include safety, weight and dimensional estimation, positioning of equipment slings, rollers, jacks, levers, dollys, ropes, chains, padding, and other related topics. Upon completion, students should be able to safely relocate and set up equipment using accepted rigging practices. (F)

MNT 240     Indus Equip Troubleshoot     1     3     2
This course covers the various service procedures, tools, instruments, and equipment necessary to analyze and repair typical industrial equipment. Emphasis is placed on electromechanical and fluid power equipment troubleshooting, calibration, and repair, including
common techniques and procedures. Upon completion, students should be able to troubleshoot and repair industrial equipment. (S)

Magnetic Resonance Imaging

MRI 210  MRI Physics & Equipment  3  0  3
Prerequisites: Enrollment in the CT/MRI diploma or MRI certificate programs
This course covers the physical principles of image formation, data acquisition, and image processing in magnetic resonance imaging. Emphasis is placed on instrumentation, fundamentals, pulse sequences, data manipulation, imaging parameters, options, and their effects on image quality. Upon completion, students should be able to understand the principles behind image formation, data acquisition, and image processing in magnetic resonance imaging. (S)

MRI 211  MRI Procedures  4  0  4
Prerequisites: Enrollment in the CT/MRI diploma or MRI certificate programs
This course covers patient care, magnetic field safety, cross-sectional anatomy, contrast media, and scanning procedures in magnetic resonance imaging. Emphasis is placed on patient assessment and monitoring, safety precautions, contrast agents use, methods of data acquisition, and identification of cross-sectional anatomy. Upon completion, students should be able to integrate all facets of imaging procedures in magnetic resonance imaging. (S)

MRI 231  MRI Clinical Practicum  0  33  11
Prerequisites: Enrollment in the CT/MRI diploma or MRI certificate programs
This course provides experience in the computed tomography clinical setting. Emphasis is placed on patient care and positioning, scanning procedures, and image production in magnetic resonance imaging. Upon completion, students should be able to assume a variety of duties and responsibilities within the magnetic resonance clinical environment. (S)

Marketing and Retailing

MKT 120  Principles of Marketing  3  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. (S)

MKT 220  Advertising and Sales Promotion  3  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. (S)
See the SEL and SEM prefixes for generic Selected Topics and Seminar course descriptions.
Mathematics

Initial student placement in developmental courses is based on individual college placement testing policies and procedures. Students should begin developmental course work at the appropriate level indicated by that college’s placement test.

**MAT 050 Basic Math Skills**

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. This course is not eligible for Financial Aid. (F,S)

**MAT 060 Essential Mathematics**

Prerequisite: Success completion of MAT 050 or Math Placement
This course is a comprehensive study of mathematical skills which should provide a strong mathematical foundation to pursue further study. Topics include principles and applications of decimals, fractions, percents, ratio and proportion, order of operations, geometry, measurement, and elements of algebra and statistics. Upon completion, students should be able to perform basic computations and solve relevant, multi-step mathematical problems using technology where appropriate. (F/S/SS)

**MAT 070 Introductory Algebra**

Prerequisites: Math Placement or MAT 060. All students enrolling in MAT 070 must demonstrate competency by achieving satisfactory scores on either the CPT, SAT, ACT or the Math 060 Proficiency Assessment.
Corequisite: RED 080 or ENG 085
This course establishes a foundation in algebraic concepts and problem solving. Topics include signed numbers, exponents, order of operations, simplifying expressions, solving linear equations and inequalities, graphing, formulas, polynomials, factoring, and elements of geometry. Upon completion, students should be able to apply the above concepts in problem solving using appropriate technology. (F/S/SS)

**MAT 080 Intermediate Algebra**

Prerequisites: MAT 070 or Math Placement. All students enrolling in MAT 080 must demonstrate competency by achieving satisfactory scores on either the CPT, SAT, ACT or the Math 070 Proficiency Assessment.
Corequisite: RED 080 or ENG 085
This course continues the study of algebraic concepts with emphasis on applications. Topics include factoring; rational expressions; rational exponents; rational, radical, and quadratic equations; systems of equations; inequalities; graphing; functions; variations; complex numbers; and elements of geometry. Upon completion, students should be able to apply the above concepts in problem solving using appropriate technology. (F/S/SS)
MAT 101  Applied Mathematics I  2  2  3
Prerequisites: MAT 060 or Math Placement
All students enrolling in MAT 101 must demonstrate competency by achieving satisfactory scores on either the CPT, SAT, ACT or the Math 060 Proficiency Assessment.
This course is a comprehensive review of arithmetic with basic algebra designed to meet the needs of certificate and diploma programs. Topics include arithmetic and geometric skills used in measurement, ratio and proportion, exponents and roots, applications of percent, linear equations, formulas, and statistics. Upon completion, students should be able to solve practical problems in their specific areas of study. This course is intended for certificate and diploma programs.

MAT 115  Mathematical Models  2  2  3
Prerequisites: Math Placement or MAT 070 and Reading Proficiency or RED 090. All students enrolling in MAT 115 must demonstrate competency by achieving satisfactory scores on either the CPT, SAT, ACT or Math 070 and Reading 090 Proficiency Assessments.
This course develops the ability to utilize mathematical skills and technology to solve problems at a level found in non-mathematics-intensive programs. Topics include applications to percent, ratio and proportion, formulas, statistics, functional notation, linear functions and their graphs, probability, sampling techniques, scatter plots, and modeling. Upon completion, students should be able to solve practical problems, reason and communicate with mathematics, and work confidently, collaboratively, and independently. (F/S)

MAT 121  Algebra/Trigonometry I  2  2  3
Prerequisites: Math Placement or MAT 070 and Reading Proficiency or RED 090. All students enrolling in MAT 121 must demonstrate competency by achieving satisfactory scores on either the CPT, SAT, ACT or Math 070 and Reading 090 Proficiency Assessments.
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 simplification, evaluation, and solving of algebraic, and radical functions; complex numbers; right triangle trigonometry; systems of equations; and the use of technology. Upon completion, students should be able to demonstrate an understanding of the use of mathematics and technology to solve problems and analyze and communicate results. (F)

MAT 122  Algebra/Trigonometry II  2  2  3
Prerequisite: MAT 121
This course extends the concepts covered in MAT 121 to include additional topics in algebra, function analysis, and trigonometry. Topics include exponential and logarithmic functions, translation and scaling of functions, Sine Law, Cosine Law, vectors, and statistics. Upon completion, students should be able to demonstrate an understanding of the use of technology to solve problems and to analyze and communicate results. (S)
MAT 151  Statistics I  3  0  3
Prerequisites: Math Placement or MAT 080
Corequisite: MAT 151A
This course provides a project-based approach to the study of basic probability, descriptive and inferential statistics, and decision making. Emphasis is placed on measures of central tendency and dispersion, correlation, regression, discrete and continuous probability distributions, quality control, population parameter estimation, and hypothesis testing. Upon completion, students should be able to describe important characteristics of a set of data and draw inferences about a population from sample data. This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in natural sciences/mathematics. (F/S)

MAT 151A  Statistics I Lab  0  2  1
Prerequisite: MAT 080
Corequisite: MAT 151
This course is a laboratory for MAT 151. Emphasis is placed on experiences that enhance the materials presented in the class. Upon completion, students should be able to solve problems, apply critical thinking, work in teams, and communicate effectively. (F/S)

MAT 161  College Algebra  3  0  3
Prerequisites: Math Placement or MAT 080 or 550 Math SAT Score.
This course provides an integrated technological approach to algebraic topics used in problem solving. Emphasis is placed on applications involving equations and inequalities, polynomials, rational, exponential and logarithmic functions; and graphing and data analysis/modeling. Upon completion, students should be able to choose an appropriate model to fit a data set and use the model for analysis and prediction. This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in natural sciences/mathematics for an AA degree. (F/S)
*Note: All students enrolling in MAT 161 must demonstrate competency by achieving satisfactory scores on either the CPT, SAT, ACT, or MAT 080 Proficiency Assessment.

MAT 171  Precalculus Algebra  3  0  3
Prerequisites: MAT 080 or Math Placement Score or 550+ Math SAT Score
Corequisites: MAT 171A
This is the first of two courses designed to emphasize topics which are fundamental to the study of calculus. Emphasis is placed on equations and inequalities, functions (linear, polynomial, rational), systems of equations and inequalities, and parametric equations. Upon completion, students should be able to solve practical problems and use appropriate models for analysis and predictions. This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in natural sciences/mathematics. (F/S/SS)

MAT 171A  Precalculus Algebra Lab  0  2  1
Prerequisites: MAT 080 or Math Placement Score or 550+ Math SAT Score
Corequisites: MAT 171
This course is a laboratory for MAT 171. Emphasis is placed on experiences that
enhance the materials presented in the class. Upon completion, students should be able to solve problems, apply critical thinking, work in teams, and communicate effectively. (F/S/SS)

**MAT 172 Precalculus Trigonometry** 3 0 3
Prerequisites: MAT 171
Corequisites: MAT 172A
This is the second of two courses designed to emphasize topics which are fundamental to the study of calculus. Emphasis is placed on properties and applications of transcendental functions and their graphs, right and oblique triangle trigonometry, conic sections, and vectors. Upon completion, students should be able to solve practical problems and use appropriate models for analysis and prediction. This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in natural sciences/mathematics. (S)

**MAT 172A Precalculus Trig. Lab** 0 2 1
Prerequisites: MAT 171
Corequisites: MAT 172
This course is a laboratory for MAT 172. Emphasis is placed on experiences that enhance the materials presented in the class. Upon completion, students should be able to solve problems, apply critical thinking, work in teams, and communicate effectively. (S)

**MAT 252 Statistics II** 3 0 3
Prerequisites: MAT 151 and either MAT 121 or MAT 161 or MAT 171
Corequisite: MAT 252A
This course provides a technology-based treatment of multiple sample inferential statistics. Emphasis is placed on two sample hypothesis tests and confidence intervals, linear and multiple regression, analysis of variance, experimental design, and nonparametric techniques. Upon completion, students should be able to draw statistical inferences on multiple sample data taken from business and health, social, natural, and applied sciences. (S)

**MAT 252A Statistics II Lab** 0 2 1
Prerequisites: MAT 151 and either MAT 121 or MAT 161 or MAT 171
Corequisite: MAT 252
This course is a laboratory for MAT 252. Emphasis is placed on experiences that enhance the materials presented in the class. Upon completion, students should be able to solve problems, apply critical thinking, work in teams, and communicate effectively. (S)

**MAT 263 Brief Calculus** 3 0 3
Prerequisite: MAT 161 or MAT 171
This course introduces concepts of differentiation and integration and their applications to solving problems; the course is designed for students needing one semester of calculus. Topics include functions, 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 under-
standing of the use of basic calculus and technology to solve problems and to analyze and communicate results. This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in natural science/mathematics. (D)

MAT 263A Brief Calculus Lab 0 2 1
Prerequisite: MAT 161 or MAT 171
Corequisite: MAT 263
This course is a laboratory for MAT 263. Emphasis is placed on experiences that enhance the materials presented in the class. Upon completion, students should be able to solve problems, apply critical thinking, work in teams, and communicate effectively. (D)

MAT 271 Calculus I 3 2 4
Prerequisite: MAT 172 or MAT 175 or department chair’s permission
This course covers in depth the differential calculus portion of a three-course calculus sequence. Topics include limits, continuity, derivatives, and integrals of algebraic and transcendental functions of one variable, with applications. Upon completion, students should be able to apply differentiation and integration techniques to algebraic and transcendental functions. This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in natural sciences/mathematics. (F)

MAT 272 Calculus II 3 2 4
Prerequisite: MAT 271
This course provides a rigorous treatment of integration and is the second calculus course in a three-course sequence. Topics include 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 use integration and approximation techniques to solve application problems. This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in natural sciences/mathematics. (S)

MAT 273 Calculus III 3 2 4
Prerequisite: MAT 272
This course covers the calculus of several variables and is the third calculus course in a three-course sequence. Topics include functions of several variables, partial derivatives, multiple integrals, solid analytical geometry, vector-valued functions, and line and surface integrals. Upon completion, students should be able to solve problems involving vectors and functions of several variables. This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in natural sciences/mathematics. (D)

MAT 280 Linear Algebra 3 0 3
Prerequisite: MAT 271
This course provides a study of linear algebra topics with emphasis on the development of both abstract concepts and applications. Topics include vectors, systems of
equations, matrices, determinants, vector spaces, linear transformations in two or three dimensions, eigenvectors, eigenvalues, diagonalization and orthogonality. Upon completion, students should be able to demonstrate both an understanding of the theoretical concepts and appropriate use of linear algebra models to solve application problems. (D)

MAT 285 Differential Equations  3 0 3
Prerequisite: MAT 272
This course provides an introduction to ordinary differential equations with an emphasis on applications. Topics include first-order, linear higher-order, and systems of differential equations; numerical methods; series solutions; eigenvalues and eigenvectors; Laplace transforms; and Fourier series. Upon completion, students should be able to use differential equations to model physical phenomena, solve the equations, and use the solutions to analyze the phenomena. (D)

**Mechanical**

MEC 110 Introduction to CAD/CAM  1 2 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. (F)

MEC 111 Machine Processes I  1 4 3
This course introduces safety, hand tools, machine processes, measuring instruments, and the operation of machine shop equipment. Topics include safety, measuring tools, and the basic setup and operation of lathes, milling machines, drill presses, and saws. Upon completion, students should be able to manufacture a simple part to a specified tolerance. (F)

MEC 112 Machine Processes II  2 3 3
Prerequisite: MEC 111
This course covers advanced use of milling machines and lathes. Emphasis is placed on safety and compound setup of milling machines and lathes for manufacture of projects with a specified fit. Upon completion, students should be able to demonstrate proper procedures for manufacture of assembled parts. (S)

MEC 145 Manufacturing Materials  2 3 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. (S)

MEC 172 Intro to Metallurgy  2 2 3
This course covers the production, properties, testing, classification, microstructure,
and heat-treating effects of ferrous and non-ferrous metals. Topics include the iron-carbon phase diagram, ITT diagram, ANSI code, quenching, senescing, and other processes concerning metallurgical transformations. Upon completion, students should be able to understand the iron-carbon phase diagram, ITT diagram, microstructure images, and other phenomena concerning the behavior of metals. (S)

**MEC 250 Statics & Strength of Mat.**

Prerequisite: PHY 131 or PHY 151
This course covers the concepts and principles of statics and stress analysis. Topics include systems of forces on structures in equilibrium and analysis of stresses and strains on these components. Upon completion, students should be able to analyze forces and the results stresses and strains on structural components. (S)

See the SEL and SEM prefixes for generic Selected Topics and Seminar course descriptions.

### Medical Assisting

**MED 121 Medical Terminology I**

Prerequisite: Reading proficiency or RED 090
This course introduces prefixes, suffixes, and word roots used in the language of medicine. Topics include medical vocabulary and the terms that relate to the anatomy, physiology, pathological conditions, and treatment of selected systems. Upon completion, students should be able to pronounce, spell, and define medical terms as related to selected body systems and their pathological disorders. (F)

**MED 122 Medical Terminology II**

Prerequisite: MED 121
This course is the second in a series of medical terminology courses. Topics include medical vocabulary and the terms that relate to the anatomy, physiology, pathological conditions, and treatment of selected systems. Upon completion, students should be able to pronounce, spell, and define medical terms as related to selected body systems and their pathological disorders. (S)

See the SEL and SEM prefixes for generic Selected Topics and Seminar course descriptions.

### Medical Sonography

**SON 110 Intro to Sonography**

Prerequisite: Enrollment in the Medical Sonography or Cardiovascular Sonography program
Corequisite: SON 130
This course provides an introduction to medical sonography. Topics include applications, sonographic terminology, history, patient care, ethics, and basic skills. Upon completion, students should be able to define professionalism and sonographic applications and perform basic patient care skills and preliminary scanning techniques. (F)
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<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
<th>Hours</th>
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<tbody>
<tr>
<td>SON 111</td>
<td>Sonographic Physics</td>
<td>3</td>
<td>3</td>
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<td></td>
<td>Prerequisite: CVS 163 or SON 110</td>
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<td></td>
<td>This course introduces ultrasound physical principles, bioeffects, and sonographic instrumentation. Topics include sound wave mechanics, transducers, sonographic equipment, Doppler physics, bioeffects, and safety. Upon completion, students should be able to demonstrate knowledge of sound wave mechanics, transducers, sonography equipment, the Doppler effect, bioeffects, and safety. (S)</td>
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<tr>
<td>SON 120</td>
<td>SON Clinical Ed I</td>
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<td></td>
<td>Prerequisite: SON 110</td>
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<td>This course provides active participation in clinical sonography. Emphasis is placed on imaging, processing, and technically evaluating sonographic examinations. Upon completion, students should be able to image, process, and evaluate sonographic examinations. (S)</td>
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<tr>
<td>SON 121</td>
<td>SON Clinical Ed II</td>
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<td></td>
<td>Prerequisite: SON 120</td>
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<tr>
<td></td>
<td>This course provides continued active participation in clinical sonography. Emphasis is placed on imaging, processing, and technically evaluating sonographic examinations. Upon completion, students should be able to image, process, and evaluate sonographic examinations. (SS)</td>
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<tr>
<td>SON 130</td>
<td>Abdominal Sonography I</td>
<td>2</td>
<td>3</td>
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<td>Corequisite: SON 110</td>
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<td>This course introduces abdominal and small parts sonography. Emphasis is placed on the sonographic anatomy of the abdomen and small parts with correlated laboratory exercises. Upon completion, students should be able to recognize and acquire basic abdominal and small parts images. (F)</td>
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<tr>
<td>SON 131</td>
<td>Abdominal Sonography II</td>
<td></td>
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<td></td>
<td>Prerequisite: SON 130</td>
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<tr>
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<td>This course covers abdominal and small parts pathology recognizable on sonograms. Emphasis is placed on abnormal sonograms of the abdomen and small parts with correlated sonographic cases. Upon completion, students should be able to recognize abnormal pathological processes in the abdomen and on small parts sonographic examinations. (S)</td>
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<tr>
<td>SON 140</td>
<td>Gynecological Sonography</td>
<td>2</td>
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<td>Prerequisite: SON 110</td>
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<td>This course is designed to relate gynecological anatomy and pathology to sonography. Emphasis is placed on gynecological relational anatomy, endovaginal anatomy, and gynecological pathology. Upon completion, students should be able to recognize normal and abnormal gynecological sonograms. (S)</td>
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<tr>
<td>SON 220</td>
<td>SON Clinical Ed III</td>
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<td></td>
<td>Prerequisites: SON 110 and 121</td>
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<td></td>
<td>This course provides continued active participation in clinical sonography. Emphasis is placed on imaging, processing, and technically evaluating sonographic examinations.</td>
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</tbody>
</table>
Upon completion, students should be able to image, process, and evaluate sonographic examinations. (F)

SON 221  SON Clinical Ed IV  0  24  8
Prerequisite: SON 220
This course provides continued active participation off campus in clinical sonography. Emphasis is placed on imaging, processing, and technically evaluating sonographic examinations. Upon completion, students should be able to image, process, and evaluate sonographic examinations. (S)

SON 225  Case Studies  0  3  1
Prerequisite: SON 110 or CVS 163
This course offers the opportunity to present interesting cases found during clinical education. Emphasis is placed on presentation methods which integrate patient history, laboratory results, and sonographic findings with reference to current literature. Upon completion, students should be able to correlate information necessary for complete presentation of case studies. (F)

SON 241  Obstetrical Sonography I  2  0  2
Prerequisite: SON 110
This course covers normal obstetrical sonography techniques, the normal fetal environment, and abnormal first trimester pregnancy states. Topics include gestational dating, fetal anatomy, uterine environment, and first trimester complications. Upon completion, students should be able to produce gestational sonograms which document age, evaluate the uterine environment, and recognize first trimester complications. (F)

SON 242  Obstetrical Sonography II  2  0  2
Prerequisite: SON 241
This course covers second and third trimester obstetrical complications and fetal anomalies. Topics include abnormal fetal anatomy and physiology and complications in the uterine environment. Upon completion, students should be able to identify fetal anomalies, fetal distress states, and uterine pathologies. (S)

SON 250  Vascular Sonography  1  3  2
Prerequisite: SON 111
This course provides an in-depth study of the anatomy and pathology of the vascular system. Topics include peripheral arterial, peripheral venous, and cerebrovascular disease testing. Upon completion, students should be able to identify normal vascular anatomy and recognize pathology of the vascular system. (F)

SON 289  Sonographic Topics  2  0  2
Prerequisites: SON 220
Corequisite: SON 221
This course provides an overview of sonographic topics in preparation for certification examinations. Emphasis is placed on registry preparation. Upon completion, students should be able to demonstrate a comprehensive knowledge of sonography and
be prepared for the registry examinations. (S)
See the SEL and SEM prefixes for generic Selected Topics and Seminar course descriptions.

Music

MUS 110 Music Appreciation 3 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 has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in humanities/fine arts. (F/S)

MUS 111 Fundamentals of Music 3 0 3
This course is an introductory course for students with little or no music background. Emphasis is placed on music notation, rhythmic patterns, scales, key signatures, intervals, and chords. Upon completion, students should be able to demonstrate an understanding of the rudiments of music. (D)

MUS 113 American Music 3 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. This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in humanities/fine arts. (F/S)

MUS 121 Music Theory I 3 2 4
Prerequisite: Permission of the instructor.
This course provides an in-depth introduction to melody, rhythm, and harmony. Emphasis is placed on fundamental melodic, rhythmic, and harmonic analysis, introduction to part writing, ear-training, and sight-singing. Upon completion, students should be able to demonstrate proficiency in the recognition and application of the above. Students must have permission of music director before registering. (F)

MUS 122 Music Theory II 3 2 4
Prerequisite: MUS 121
This course is a continuation of studies begun in MUS 121. Emphasis is placed on advanced melodic, rhythmic, and harmonic analysis and continued studies in part-writing, ear-training, and sight-singing. Upon completion, students should be able to demonstrate proficiency in the recognition and application of the above. (S)

MUS 131 Chorus I 0 2 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. (F/S)

MUS 132 Chorus II  
Prerequisite: MUS 131
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. (F/S)

MUS 133 Band I  
Prerequisite: MUS 133
This course provides an opportunity for those who play a band instrument to gain experience playing in an ensemble. Emphasis is placed on band techniques and the study and performance of a variety of styles and periods of band literature. Upon completion, students should be able to demonstrate skills needed to participate in ensemble playing leading to performance. Student must provide instrument. (D)

MUS 134 Band II  
Prerequisite: MUS 133
This course is a continuation of MUS 133. Emphasis is placed on band techniques and the study and performance of a variety of styles and periods of band literature. Upon completion, students should be able to demonstrate skills needed to participate in ensemble playing leading to performance. Student must provide instrument. (D)

MUS 141 Ensemble I  
This course provides an opportunity to perform in any combination of instrumental, vocal, or keyboard groups of two or more. Emphasis is placed on the development of performance skills and the study of a variety of styles and periods of ensemble literature. Upon completion, students should be able to demonstrate skills needed to participate in ensemble playing leading to performance. Student must provide instrument. (D)

MUS 142 Ensemble II  
Prerequisite: MUS 141
This course is a continuation of MUS 141. Emphasis is placed on the development of performance skills and the study of a variety of styles and periods of ensemble literature. Upon completion, students should be able to demonstrate skills needed to participate in ensemble playing leading to performance. (D)

MUS 151P Class Music I: Piano  
This course provides group instruction in skills and techniques of the particular instrument or voice for those with little or no previous experience. Emphasis is placed on techniques and styles and the exploration and study of appropriate literature. Upon completion, students should be able to demonstrate proficiency in the studied skills and repertoire through performance. (F/S)

MUS 151G Class Music I: Guitar  
This course provides group instruction in skills and techniques of the particular instru-
ment or voice for those with little or no previous experience. Emphasis is placed on techniques and styles and the exploration and study of appropriate literature. Upon completion, students should be able to demonstrate proficiency in the studied skills and repertoire through performance. Students must provide instruments. (F/S)

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<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
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<tbody>
<tr>
<td>MUS 151V</td>
<td>Class Music I: Voice</td>
<td>0 2 1</td>
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<tr>
<td>MUS 152P</td>
<td>Class Music II: Piano</td>
<td>0 2 1</td>
</tr>
<tr>
<td>MUS 152G</td>
<td>Class Music II: Guitar</td>
<td>0 2 1</td>
</tr>
<tr>
<td>MUS 152V</td>
<td>Class Music II: Voice</td>
<td>0 2 1</td>
</tr>
<tr>
<td>MUS 161</td>
<td>Applied Music I</td>
<td>1 2 2</td>
</tr>
<tr>
<td>MUS 162</td>
<td>Applied Music II</td>
<td>1 2 2</td>
</tr>
</tbody>
</table>

*Note: The areas of study include piano (P), voice (V), brass (B), woodwind (W), guitar (G), and percussion (D).
MUS 210 History of Rock Music  
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. (D)

MUS 211 History of Country Music  
This course introduces the varied origins of country music and the commercialization of this art form. Emphasis is placed on historical, sociocultural, and stylistic factors related to country music and musicians. Upon completion, students should be able to identify specific styles and explain the influence of pop culture on the development of country music. (D)

MUS 214 Electronic Music I  
Prerequisites: MUS 111
This course provides an opportunity to study and explore various electronic instruments and devices. Emphasis is placed on fundamental MIDI applications and implementation, features and application of sequences, sound modules, and digital keyboards. Upon completion, students should be able to demonstrate proficiency by creation of appropriate musical projects using the equipment and techniques covered. This course has been approved to satisfy the Comprehensive Articulation Agreement pre-major and/or elective course requirement. (D)

MUS 215 Electronic Music II  
Prerequisites: MUS 214
This course is a continuation of MUS 214. Emphasis is placed on advanced MIDI applications and implementation and continued work with sequencers, sound modules, and digital keyboards. Upon completion, students should be able to demonstrate proficiency by creation of appropriate musical projects using the equipment and techniques covered. This course has been approved to satisfy the Comprehensive Articulation Agreement pre-major and/or elective course requirement.

MUS 217 Elementary Conducting  
Prerequisite: MUS 111
This course introduces the basic patterns and skills for conducting instrumental and vocal groups. Emphasis is placed on conducting beat patterns, expressive gestures, fermatas, accents, tempos, and rehearsal techniques. Upon completion, students should be able to demonstrate the above skills by conducting vocal and/or instrumental groups. (D)

MUS 221 Music Theory III  
Prerequisite: MUS 122
This course is a continuation of MUS 122. Emphasis is placed on altered and chromatic harmony, common practice era compositional techniques and forms, and con-
tinued studies in part-writing, ear-training, and sight-singing. Upon completion, stu-
dents should be able to demonstrate proficiency in the recognition and application of
the above. (D)

MUS 222 Music Theory IV 3 2 4
Prerequisite: MUS 221
This course is a continuation of studies begun in MUS 221. Emphasis is placed on
continued study of common practice era compositional techniques and forms, 20th
century practices, ear-training, and sight-singing. Upon completion, students should be
able to demonstrate proficiency in the recognition and application of the above. (D)

MUS 231 Chorus III 0 2 1
Prerequisite: MUS 132
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. (F/S)

MUS 232 Chorus IV 0 2 1
Prerequisite: MUS 231
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. (F/S)

MUS 233 Band III 0 2 1
Prerequisite: MUS 134
This course is a continuation of MUS 134. Emphasis is placed on band techniques and
the study and performance of a variety of styles and periods of band literature. Upon
completion, students should be able to demonstrate skills needed to participate in
ensemble playing leading to performance. Students must provide instrument. (D)

MUS 234 Band IV 0 2 1
Prerequisite: MUS 233
This course is a continuation of MUS 233. Emphasis is placed on band techniques and
the study and performance of a variety of styles and periods of band literature. Upon
completion, students should be able to demonstrate skills needed to participate in
ensemble playing leading to performance. Students must provide instrument. (D)

MUS 241 Ensemble III 0 2 1
Prerequisite: MUS 142
This course is a continuation of MUS 142. Emphasis is placed on the development of per-
formance skills and the study of a variety of styles and periods of ensemble literature.
Upon completion, students should be able to demonstrate skills needed to participate in
ensemble playing leading to performance. Students must provide instrument. (D)
MUS 242  Ensemble IV 0 2 1
Prerequisite: MUS 241
This course is a continuation of MUS 241. Emphasis is placed on the development of performance skills and the study of styles of ensemble literature. Upon completion, students should be able to demonstrate skills needed to participate in ensemble playing leading to performance. Students must provide instrument. (D)

MUS 251P  Class Music III: Piano 0 2 1
Prerequisite: MUS 152P
This course is a continuation of MUS 152P. Emphasis is placed on techniques and styles and the exploration and study of appropriate literature. Upon completion, students should be able to demonstrate proficiency in the studied skills and repertoire through performance. Note: The following courses are available: piano, guitar and voice. (F/S)

MUS 252P  Class Music IV: Piano 0 2 1
Prerequisite: MUS 251P
This course is a continuation of MUS 251P. Emphasis is placed on techniques and styles and the exploration and study of appropriate literature. Upon completion, students should be able to demonstrate proficiency in the studied skills and repertoire through performance. Note: The following courses are available: piano, guitar and voice. (F/S)

MUS 261  Applied Music III 1 2 2
Prerequisite: MUS 162
This course is a continuation of MUS 162. Emphasis is placed on techniques and styles and the exploration and study of appropriate literature. Upon completion, students should be able to demonstrate proficiency in the studied skills and repertoire through performance. Additional fees are required. Note: The following courses are also available: brass, percussion, guitar, piano, voice and woodwind. (F/S)

MUS 262  Applied Music IV 1 2 2
Prerequisite: MUS 261
This course is a continuation of MUS 261. Emphasis is placed on techniques and styles and the exploration and study of appropriate literature. Upon completion, students should be able to demonstrate proficiency in the studied skills and repertoire through performance. Additional fees are required. Note: The following courses are also available: brass, percussion, guitar, piano, voice and woodwind. (F/S)

Networking Technology

NET 110  Data Comm/Networking 2 2 3
This course introduces data communication and networking. Topics include telecommunication standards, protocols, equipment, network topologies, communication software, LANs, WANs, the Internet, and network operating systems. Upon completion,
students should be able to demonstrate understanding of the fundamentals of telecommunication and networking. (F)

**NET 125**  
Routing & Switching I  
1 4 3
This course introduces the OSI model, network topologies, IP addressing, and subnet masks, simple routing techniques, and basic switching terminology. Topics include the basic functions of the seven layers of the OSI model, different classes of IP addressing and subnetting, router login scripts. Upon completion, students should be able to list the key internetworking functions of the OSI Networking Layer and how they are performed in a variety of router types. (F)

**NET 126**  
Routing & Switching II  
1 4 3
Prerequisite: NET 125
This course introduces router configurations, router protocols, switching methods, and hub terminology. Topics include the basic flow control methods, router startup commands, manipulation of router configuration files, IP and data link addressing. Upon completion, students should be able to prepare the initial router configuration files, as well as enable, verify, and configure IP addresses. (F)

**NET 225**  
Adv. Router & Switching I  
1 4 3
Prerequisite: NET 126
This course introduces advanced router configuration, advanced LAN switching theory and design, VLANs, Novell IPX, and threaded case studies. Topics include router elements and operations, adding routing protocols to a configuration, monitoring IPX operations on the router, LAN segmentation, and advanced switching methods. Upon completion students should be able to describe LAN and network segmentation with bridges, routers and switches and describe a virtual LAN. (S)

**NET 226**  
Adv. Router & Switching II  
1 4 3
Prerequisite: NET 225
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, channels, and function groups, describe the Spanning Tree protocol. (S)

**Nuclear Medicine**

**NMT 110**  
Intro to Nuclear Medicine  
2 0 2
This course provides a comprehensive introduction to the field of nuclear medicine. Topics include overview of school, program, and profession; medical terminology and ethics; medical legal issues; general patient care and radiation safety practices; and departmental organization. Upon completion, students should be able to utilize various learning resources and demonstrate understanding of radiation safety standards and ethical, professional conduct. (F)
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
<th>Lecture</th>
<th>Lab</th>
<th>Clinical</th>
</tr>
</thead>
<tbody>
<tr>
<td>NMT 126</td>
<td>Nuclear Physics</td>
<td>2</td>
<td>0</td>
<td>2</td>
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<td></td>
<td>Prerequisite: NMT 110</td>
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<td></td>
<td>This course introduces the fundamental principles of the physics that underlie nuclear medicine. Topics include atomic structure, electromagnetic and particulate radiation, decay schemes, production of radionuclides with emphasis on radionuclide generators, and decay calculations. Upon completion, students should be able to demonstrate an understanding of the physical concepts covered in the course. (S)</td>
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<tr>
<td>NMT 132</td>
<td>Overview-Clinical Nuc Med</td>
<td>2</td>
<td>6</td>
<td>4</td>
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<td>Prerequisite: NMT 110</td>
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<td>This course is designed to familiarize students with the clinical practice of nuclear medicine. Emphasis is placed on the routine clinical procedures, radiopharmaceuticals and dosage, equipment manipulation, and basic patient care. Upon completion, students should be able to demonstrate integration of the principles covered in the classroom with the clinical experience. (SS)</td>
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<tr>
<td>NMT 134</td>
<td>Nuclear Pharmacy</td>
<td>2</td>
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<td>2</td>
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<td>Prerequisite: NMT 110</td>
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<td>This course covers the formulation and application of radiopharmaceuticals. Topics include the preparation, handling, disposition, and quality control of clinically useful radiopharmaceuticals. Upon completion, students should be able to discuss the appropriate use and disposition of radiopharmaceuticals currently used in clinical nuclear medicine. (SS)</td>
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<tr>
<td>NMT 211</td>
<td>NMT Clinical Practice I</td>
<td>0</td>
<td>21</td>
<td>7</td>
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<tr>
<td></td>
<td>Prerequisite: NMT 132</td>
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<td></td>
<td>This course is one of two courses designed to provide clinical practice in nuclear medicine. Topics include radiation protection, radiopharmaceutical use, patient care, imaging procedures, non-imaging procedures, administrative procedures, and the therapeutic use of radionuclide. Upon completion, students should be able to demonstrate performance of the procedures covered in the course. (F)</td>
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<tr>
<td>NMT 212</td>
<td>Proc for Nuclear Med I</td>
<td>2</td>
<td>0</td>
<td>2</td>
<td></td>
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<tr>
<td></td>
<td>Prerequisite: NMT 132</td>
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<td>This course begins the in-depth study of clinical procedures performed by nuclear medicine technologists. Emphasis is placed on dose administration, use of instrumentation, computer applications, and normal and abnormal presentation. Upon completion, students should be able to demonstrate an understanding of the principles related to the procedures presented in the course. (F)</td>
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<tr>
<td>NMT 214</td>
<td>Radiobiology</td>
<td>2</td>
<td>0</td>
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<td></td>
<td>Prerequisite: NMT 132</td>
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<td>This course covers the principles of radiation biology. Emphasis is placed on a system’s sensitivity to radiation, radiation pathology, and the biological effects of radiation. Upon completion, students should be able to demonstrate an understanding of the effects of radiation in nuclear medicine. (F)</td>
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</tbody>
</table>
NMT 215  Non-Imaging Instrument.  1  3  2
Prerequisite: NMT 132
This course covers the proper operation of various types of non-imaging equipment used in nuclear medicine. Emphasis is placed on principles of radiation detection, quality control procedures, various counting problems, and machine-specific operating procedures. Upon completion, students should be able to demonstrate the proper use of the devices discussed in the course. (F)

NMT 218  Computers in Nuc Med  2  0  2
Prerequisite: NMT 132
This course provides a general introduction to the operation of computers and the application of computers to the field of nuclear medicine. Topics include number systems, major system components, input/output devices, and acquisition and processing of nuclear medicine images. Upon completion, students should be able to demonstrate an understanding of the concepts presented. (F)

NMT 221  NMT Clinical Practice II  0  21  7
Prerequisite: NMT 132
This course is one of two courses designed to provide clinical practice in nuclear medicine. Topics include radiation protection, radiopharmaceutical use, patient care, imaging procedures, non-imaging procedures, administrative procedures, and the therapeutic use of radionuclides. Upon completion, students should be able to demonstrate performance of the procedures covered in this course. (S)

NMT 222  Proc for Nuclear Med II  2  0  2
Prerequisite: NMT 132
This course concludes the in-depth study of clinical procedures performed in nuclear medicine. Topics include method of dose administration, data acquisition parameters, computer use, and data patterns consistent with normal and described pathological states. Upon completion, students should be able to demonstrate an understanding of the principles related to the procedures discussed in the course. (S)

NMT 225  Imaging Instrumentation  1  3  2
Prerequisite: NMT 132
This course covers the operations of various imaging equipment used in nuclear medicine. Emphasis is placed on planar and SPECT gamma cameras. Upon completion, students should be able to safely operate and evaluate performance characteristics of the equipment discussed in the course. (S)
See the SEL and SEM prefixes for generic Selected Topics and Seminar course descriptions.

NMT 289  Nuclear Medicine Technology Topics  2  2  3
Prerequisites: NMT 221 and NMT 222
This course covers professional practice in nuclear medicine. Emphasis is placed on the procedures vital to a clinical nuclear medicine staff technologist. Upon completion, students should be able to demonstrate a comprehensive knowledge of nuclear medicine and be prepared for the comprehensive examination. (S)
COURSE DESCRIPTIONS

Nursing

NUR 110  Nursing I  5  9  8
Prerequisite: Admission to the Associate Degree Nursing program
Corequisites: BIO 168 and PSY 150
This course introduces concepts basic to beginning nursing practice. Emphasis is
placed on introducing the nurse's role as provider of care, manager of care, and mem-
ber within the discipline of nursing. Upon completion, students should be able to
demonstrate beginning competence in caring for individuals with common alterations
in health. Concepts studied include nursing as a profession, the nursing process, health
and wellness, human needs theory, and skills basic to nursing. (F)

NUR 120  Nursing II  5  9  8
Prerequisite: NUR 110
Corequisites: BIO 169 and PSY 241
This course provides an expanded knowledge base for delivering nursing care to indi-
viduals of various ages. Emphasis is placed on developing the nurse's role as provider
of care, manager of care, and member within the discipline of nursing. Upon comple-
tion, students should be able to participate in the delivery of nursing care for individu-
als with common alterations in health. The focus of this course is utilizing the nursing
process to meet the needs of clients adapting to alterations in health related to surgery
and cardiovascular, respiratory, regulatory, and integumentary function. (S)

NUR 130  Nursing III  4  9  7
Prerequisite: NUR 120
Corequisite: BIO 170
This course provides an expanded knowledge base for delivering nursing care to individ-
uals of various ages. Emphasis is placed on expanding the nurse's role as provider of
care, manager of care, and member within the discipline of nursing. Upon completion,
students should be able to deliver nursing care to individuals with common alterations
in health. The focus of this course is utilizing the nursing process to meet the needs of
clients adapting to alterations in health related to child bearing and reproduction. (SS)

NUR 210  Nursing IV  5  15  10
Prerequisite: NUR 130
Corequisites: ENG 111, 111A and CIS 113
This course provides an expanded knowledge base for delivering nursing care to indi-
viduals of various ages. Emphasis is placed on using collaboration as a provider of
care, manager of care, and member within the discipline of nursing. Upon completion,
students should be able to modify nursing care for individuals with common alter-
ations in health. The focus of this course is utilizing the nursing process to meet the
more complex needs of clients adapting to alterations in health related to cardiovascu-
lar, hematologic, gastrointestinal, hepatic/biliary, endocrine, neurological, muscu-
oskeletal, and renal function. (F)
NUR 220  Nursing V  4  18  10
Prerequisite: NUR 210
Corequisites: ENG 114 and HUM/Fine Arts
This course provides an expanded knowledge base for delivering nursing care to individuals of various ages. Emphasis is placed on the nurse’s role as an independent provider and manager of care for a group of individuals and member of a multidisciplinary team. Upon completion, students should be able to provide comprehensive nursing care to a group of individuals with common complex health alterations. Special clinical opportunities will be provided in the mental health, community health, and acute care settings. (S) See the SEL and SEM prefixes for generic Selected Topics and Seminar course descriptions.

Nursing Assistant

NAS 101  Nursing Assistant I  3  5  5
This course introduces basic nursing skills required to provide personal care for patients, residents, or clients in a health care setting. Topics include communications, safety, patients’ rights, personal care, vital signs, elimination, nutrition, emergencies, rehabilitation, and mental health. Upon completion, students should be able to demonstrate skills necessary to qualify as a Nursing Assistant I with the North Carolina Nurse Aide I Registry. This is a certificate level course. (F)

NAS 102  Nursing Assistant II  3  8  6
This course provides training in selected advanced nursing assistant procedures. Emphasis is placed on sterile techniques, respiratory procedures, catheterizations, wound and trach care, irrigations, and ostomy care. Upon completion, students should be able to demonstrate skills necessary to qualify as a Nursing Assistant II with the North Carolina Board of Nursing. This is a certificate level course. (S)

NAS 103  Home Health Care  2  0  2
This course covers basic health issues that affect clients in the home setting. Emphasis is placed on home safety, recognizing significant changes in the client’s condition, family dynamics, and use of home health care equipment. Upon completion, students should be able to identify care for clients at home. This is a certificate level course. (F)

Office Systems Technology

OST 122  Office Computations  1  2  2
This course introduces the keypad and the touch method using the electronic calculator. Topics include mathematical functions in business applications. Upon completion, students should be able to use the electronic calculator to solve a wide variety of problems commonly encountered in business. (SS)
OST 131 Keyboarding
This course covers basic keyboarding skills. Emphasis is placed on the touch system, correct techniques, and development of speed and accuracy. Upon completion, students should be able to key at an acceptable speed and accuracy level using the touch system. (F/S/SS)

OST 134 Text Entry and Formatting
Prerequisite: OST 131 or proficiency exam
This course is designed to provide the 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 mailable documents. (S)

OST 136 Word Processing
This course introduces 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. (F)

OST 148 Med Coding Billing & Insurance
Prerequisites: None
This course introduces CPT and ICD coding as they apply to medical insurance and billing. Emphasis is placed on accuracy in coding, forms preparation, and posting. Upon completion, students should be able to describe the steps of the total billing cycle and explain the importance of accuracy. (F)

OST 149 Medical Legal Issues
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. This course is a unique concentration requirement in the Medical Office Systems Technology concentration in the Office Systems Technology program. (F)

OST 164 Text Editing Applications
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. (S)

OST 184 Records Management
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. (SS)
OST 201 Medical Transcription I 3 2 4  
Prerequisites: OST 136 and OST 164  
Corequisites: MED 122 or OST 142  
This course introduces dictating equipment and typical medical dictation. Emphasis is placed on efficient use of equipment, dictionaries, PDRs, and other reference materials. Upon completion, students should be able to efficiently operate dictating equipment and to accurately transcribe a variety of medical documents in a specified time. This course is intended for diploma programs. (F)

OST 202 Medical Transcription II 3 2 4  
Prerequisites: OST 201  
This course provides additional practice in transcribing documents from various medical specialties. Emphasis is placed on increasing transcription speed and accuracy and understanding medical procedures and terminology. Upon completion, students should be able to accurately transcribe a variety of medical documents in a specified time. This course is intended for diploma programs. (S)

OST 223 Machine Transcription I 1 2 2  
Prerequisites: OST 134, OST 136, and OST 164  
This course covers the use of transcribing machines to produce mailable documents. Emphasis is placed on appropriate formatting, advanced text editing skills, and transcription techniques. Upon completion, students should be able to transcribe documents into mailable copy. (F)

OST 233 Office Publications Design 2 2 3  
Prerequisites: OST 136 and OST 131 or proficiency exam  
This course provides entry-level skills in using software with desktop publishing capabilities. Topics include principles of page layout, desktop publishing terminology and applications, and legal and ethical considerations of software use. Upon completion, students should be able to design and produce professional business documents and publications. (S)

OST 236 Adv. Word/Information Proc 2 2 3  
Prerequisite: OST 135 or OST 136  
This course develops proficiency in the utilization of advanced word/information processing functions. Topics include tables, graphics, macros, sorting, document assembly, merging, and newspaper and brochure columns. Upon completion, students should be able to produce a variety of complex business documents. (S)

OST 243 Med Office Simulation 2 2 3  
Prerequisites: OST 148  
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. This course is a unique concentration requirement in the Medical Office Systems Technology concentration in the Office Systems Technology program. (S)
OST 286  Professional Development  
3 0 3  
This course covers the personal competencies and qualities needed to project a professional image in the office. Topics include interpersonal skills, health lifestyles, appearance, attitude, personal and professional growth, multicultural awareness, and professional etiquette. Upon completion, students should be able to demonstrate these attributes in the classroom, office, and society. (S)

OST 289  Office Systems Management  
2 2 3  
Prerequisites: OST 164 and either OST 134 or OST 136  
This course provides a capstone course for the office professional. Topics include administrative office procedures, imaging, communication techniques, ergonomics, and equipment utilization. Upon completion, students should be able to function proficiently in a changing office environment. (S)  
See the SEL and SEM prefixes for generic Selected Topics and Seminar course descriptions.

Operations Management

OMT 153  Motivation and Evaluation  
2 0 2  
This course provides skills for motivation and evaluation of individuals in a workplace setting. Topics include establishing performance expectations, developing techniques for the development of job skills, coaching for optimal performance, and taking corrective actions. Upon completion, students should be able to demonstrate the skills necessary for successful job performance. (D)

OMT 155  Meeting & Presentation Skills  
3 0 3  
This course is designed to develop skills for facilitating successful meetings by enhancing employee involvement and initiative. Topics include planning meetings that promote results, encouraging diverse points of view, handling disruptive behavior, encouraging participation, and taking action when required. Upon completion, students should be able to plan and participate in meetings that accomplish positive results. (D)

OMT 222  Project Management  
3 0 3  
This course covers fundamental concepts associated with multi-task management and coordination. Topics include flow diagrams, process and operations charts, network scheduling, Gantt charts, and PERT and Critical Path Methods as tools in project management. Upon completion, students should be able to understand and apply project management tools and methods. (D)

OMT 227  Maintenance Practices  
3 0 3  
This course introduces the methods of planning, organizing, and controlling maintenance. Topics include scheduling and supervision, development and use of reports, entrance and retrieval of data, and maintenance of inventory control systems. Upon completion, students should be able to demonstrate an understanding of maintenance practices and procedures. (D)
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
<th>Hours</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>OPH 150</td>
<td>Intro. to Ophth. Med. Asst.</td>
<td>2</td>
<td>0</td>
<td>Corequisite: OPH 151&lt;br&gt;This course introduces the role, scope, and duties of the ophthalmic assistant. Topics include medical ethics, duties of assistant, medical history, basic medical terminology and an overview of human anatomy and physiology. Upon completion, students should demonstrate knowledge of medical history-taking, preliminary patient examination, basic ophthalmic equipment, and office efficiency. (SS)</td>
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<tr>
<td>OPH 151</td>
<td>Ocular Anatomy &amp; Physiology</td>
<td>2</td>
<td>0</td>
<td>Prerequisite: Entry into program&lt;br&gt;Corequisite: OPH 150&lt;br&gt;This course studies the normal anatomy and physiology of eye and orbit. Topics include structures of the eye, functioning process of the eye and correct medical terminology of the structures and functions of the eye. Upon completion, the student should be able to demonstrate a basic understanding and fundamental principles of anatomy and physiology of the eye. (SS)</td>
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<tr>
<td>OPH 103</td>
<td>Intro. to Diseases of Eye</td>
<td>2</td>
<td>0</td>
<td>Prerequisites: OPH 150 and 151&lt;br&gt;Corequisites: OPH 104, 105, and 106&lt;br&gt;This course introduces the fundamentals of common external and internal diseases of the eye and orbital region. Topics include common patient complaints, what constitutes an ocular emergency, triage procedure and common conditions and disorders. Upon completion, the student should be able to identify most common ocular diseases and determine appropriate emergency management of acute ocular problems. (F)</td>
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<tr>
<td>OPH 104</td>
<td>Basic Ophth. Pharmacology</td>
<td>2</td>
<td>0</td>
<td>Prerequisites: OPH 150 and 151&lt;br&gt;Corequisites: OPH 103, 105, and 106&lt;br&gt;This course introduces and compares drug delivery systems. Topics include topical and oral medications, use and abuse of drugs, irrigating solutions, and format for prescription writing. Upon completion, the students should be able to administer and record topical and oral medications at the physician’s direction. (F)</td>
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<tr>
<td>OPH 105</td>
<td>Maint. of Ophth. Instrum.</td>
<td>2</td>
<td>0</td>
<td>Prerequisites: OPH 150 and 151&lt;br&gt;Corequisites: OPH 103, 104, and 106&lt;br&gt;This course introduces troubleshooting and the minor repair of ophthalmic equipment. Topics include instrument maintenance on acuity projectors, ophthalmoscopes, retinoscopes, lensometers, perimeters, tangent screen, tonometers, keratometers, slit lamps and phoropters. Upon completion, the student should be able to determine proper and safe methods of changing fuses, bulbs, and batteries; sterilization of surgical instruments; other safety procedures in clinical housekeeping. (F)</td>
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</tbody>
</table>
Prerequisites: OPH 150 and 151
Corequisites: OPH 103, 104, and 105
This course introduces ophthalmic patient-care procedures. Topics include interpersonal skills with patients, work and legal ethics, confidentiality, clinical appearance, and performance. Upon completion, the student will be able to determine equipment and instruments associated with patient examination, observation of examination techniques, assigned examination lanes to maintain, basic procedures for information gathering in an examination. (F)

OPH 106

Prin. of Glaucoma/Cataract
Prerequisite: OPH 103
Corequisites: OPH 108, 109, and 110
This course introduces fundamental principles in the diagnosis and treatment of glaucoma and cataracts. Topics include diagnostic procedures including tonometry, visual fields, and A scans. Upon completion, the student should be able to perform basic diagnostic procedures and participate in the care of patients with glaucoma and cataracts. (S)

OPH 107

Ophthalmic Patient Care
Prerequisite: OPH 103
Corequisites: OPH 107, 109, and 110
This course is an overview of the care of the ophthalmic patient. Topics include systemic diseases in the eye, review of first aid, emergency equipment and supplies, infection control, identification of minor surgical equipment, and aseptic technique. Upon completion, the student should be able to apply these principles in interactions with patients. (S)

OPH 108

Ophth. & Basic Refract
Prerequisite: OPH 103
Corequisites: OPH 107, 108, and 110
This course introduces basic theoretical and clinical optics. Topics include interaction of light and lenses, refractive states of the eye, and principles of retinoscopy and refractometry. Upon completion, the student will be able to demonstrate physical and geometric optics, and basic refractometry techniques. (S)

OPH 110

Practicum II
Prerequisite: OPH 103
Corequisites: OPH 107, 108, and 109
This course provides additional clinical experience in ophthalmic patient care procedures. Topics include interpersonal skills with patients, work and legal ethics, confidentiality, appearance, and performance. Upon completion, the student will be able to demonstrate basic skills in patient care and examination techniques. Actual patient examination by student is performed under supervision. (S)
Philosophy

PHI 210 History of Philosophy 3 0 3
Prerequisite: ENG 111
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. This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in humanities/fine arts. (D)

PHI 215 Philosophical Issues 3 0 3
Prerequisite: ENG 111
This course introduces fundamental issues in philosophy considering the views of classical and contemporary philosophers. Emphasis is placed on knowledge and belief, appearance and reality, determinism and free will, faith and reason, and justice and inequality. Upon completion, students should be able to identify, analyze, and critique the philosophical components of an issue. This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in humanities/fine arts. (D)

PHI 230 Introduction to Logic 3 0 3
Prerequisite: ENG 111
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.

PHI 240 Introduction to Ethics 3 0 3
Prerequisite: ENG 111
This course introduces theories about the nature and foundations of moral judgments and applications to contemporary moral issues. Emphasis is placed on utilitarianism, rule-based ethics, existentialism, relativism versus objectivism, and egoism. Upon completion, students should be able to apply various ethical theories to individual moral issues such as euthanasia, abortion, crime and punishment, and justice. This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in humanities/fine arts. (D) See the SEL and SEM prefixes for generic Selected Topics and Seminar course descriptions.

Physical Education

PED 110 Fit and Well For Life 1 2 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 well-
ness 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. (D)

PED 111 Physical Fitness I 0 3 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. (F/S)

PED 112 Physical Fitness II 0 3 1
Prerequisite: PED 111
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. (F/S)

PED 113 Aerobics I 0 3 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. (F/S)

PED 114 Aerobics II 0 3 1
Prerequisite: PED 113
This course provides a continuation of a program of cardiovascular fitness involving rhythmic exercise. Emphasis is placed on a wide variety of aerobic activities which include cardiovascular efficiency, strength, and flexibility. Upon completion, students should be able to participate in and design a rhythmic aerobic exercise routine. (F/S)

PED 115 Step Aerobics I 0 3 1
This course introduces the fundamentals of step aerobics. Emphasis is placed on basic stepping up and down on an adjustable platform; cardiovascular fitness; and upper body, floor, and abdominal exercises. Upon completion, students should be able to participate in basic step aerobics. (F/S)

PED 116 Step Aerobics II 0 3 1
Prerequisite: PED 115
This course provides a continuation of step aerobics. Emphasis is placed on a wide variety of choreographed step patterns; cardiovascular fitness; and upper body, abdominal, and floor exercises. Upon completion, students should be able to participate in and design a step aerobics routine. (F/S)

PED 117 Weight Training I 0 3 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. (F/S)
PED 118 Weight Training II 0 3 1
Prerequisite: PED 117
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. (F/S)

PED 120 Walking for Fitness 0 3 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. (F/S)

PED 121 Walk, Jog, Run 0 3 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. (F/S)

PED 122 Yoga I 0 2 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. (D)

PED 123 Yoga II 0 2 1
Prerequisite: PED 122
This course introduces more detailed aspects of the discipline of yoga. Topics include breathing and physical postures, relaxation, and mental concentration. Upon completion, students should be able to demonstrate advanced procedures of yoga. (D)

PED 125 Self-Defense-Beginning 0 2 1
This course is designed to aid students in developing rudimentary skills in self-defense. Emphasis is placed on stances, blocks, punches, and kicks as well as non-physical means of self-defense. Upon completion, students should be able to demonstrate basic self-defense techniques of a physical and non-physical nature. (F/S)

PED 128 Golf-Beginning 0 2 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. (S)

PED 129 Golf-Intermediate 0 2 1
Prerequisite: PED 128
This course covers the more advanced phases of golf. Emphasis is placed on refining the fundamental skills and learning more advanced phases of the games such as club selection, trouble shots, and course management. Upon completion, students should be able demonstrate the knowledge and ability to play a recreational round of golf. (S)
PED 130  Tennis-Beginning  0  2  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. (F/S)

PED 131  Tennis-Intermediate  0  2  1
Prerequisite: PED 130
This course emphasizes the refinement of playing skills. Topics include continuing the development of fundamentals, learning advanced serves, and strokes and pace and strategies in singles and doubles play. Upon completion, students should be able to play competitive tennis. (S)

PED 132  Racquetball-Beginning  0  2  1
This course introduces the fundamentals of racquetball. Emphasis is placed on rules, fundamentals, and strategies of beginning racquetball. Upon completion, students should be able to play recreational racquetball. (F)

PED 134  Wrestling  0  2  1
This course introduces the basics of wrestling. Emphasis is placed on the basic techniques and fundamentals of wrestling. Upon completion, students should be able to wrestle on a recreational level. (F)

PED 137  Badminton  0  2  1
This course covers the fundamentals of badminton. Emphasis is placed on the basics of serving, clears, drops, drives, smashes, and the rules and strategies of singles and doubles. Upon completion, students should be able to apply these skills in playing situations. (F/S)

PED 138  Archery  0  2  1
This course introduces basic archery safety and skills. Topics include proper techniques of stance, bracing, drawing, and releasing as well as terminology and scoring. Upon completion, students should be able to participate safely in target archery. (F)

PED 139  Bowling-Beginning  0  2  1
This course introduces the fundamentals of bowling. Emphasis is placed on ball selection, grips, stance, and delivery along with rules and etiquette. Upon completion, students should be able to participate in recreational bowling. (F)

PED 141  Tumbling and Gymnastics  0  2  1
This course introduces basic tumbling and gymnastic techniques. Topics include the safe use of gymnastic apparatus such as uneven bars, parallel bars, pommel horse, and balance beam. Upon completion, students should be able to demonstrate skills on selected pieces of apparatus. (D)

PED 143  Volleyball-Beginning  0  2  1
This course covers the fundamentals of volleyball. Emphasis is placed on the basics of serving, passing, setting, spiking, blocking, and the rules and etiquette of volleyball. Upon completion, students should be able to participate in recreational volleyball. (S)
PED 144 Volleyball-Intermediate 0 2 1
Prerequisite: PED 143
This course covers more advanced volleyball techniques. Emphasis is placed on refining skills and developing more advanced strategies and techniques. Upon completion, students should be able to participate in competitive volleyball. (F/S)

PED 145 Basketball-Beginning 0 2 1
This course covers the fundamentals of basketball. Emphasis is placed on skill development, knowledge of the rules, and basic game strategy. Upon completion, students should be able to participate in recreational basketball. (F)

PED 147 Soccer 0 2 1
This course introduces the basics of soccer. Emphasis is placed on rules, strategies, and fundamental skills. Upon completion, students should be able to participate in recreational soccer. (F)

PED 148 Softball 0 2 1
This course introduces the fundamental skills and rules of softball. Emphasis is placed on proper techniques and strategies for playing softball. Upon completion, students should be able to participate in recreational softball. (F/S)

PED 152 Swimming-Beginning 0 2 1
This course is designed for non-swimmers and beginners. Emphasis is placed on developing confidence in the water, learning water safety, acquiring skills in floating, and learning elementary strokes. Upon completion, students should be able to demonstrate safety skills and be able to tread water, back float, and use the crawl stroke for 20 yards. (F/S)

PED 156 Scuba Diving 0 2 1
Prerequisite: PED 153 or Proficiency at the Intermediate Level.
This course provides basic instruction in fundamental skills and safety procedures for scuba diving. Emphasis is placed on the history, theory, and principles of diving; development of diving skills; safety; and care and maintenance of equipment. Upon completion, students should be able to demonstrate skills, knowledge, and techniques of scuba diving in preparation for diver certification. (F/S)

PED 160 Canoeing-Basic 0 2 1
Prerequisite: PED 152
This course provides basic instruction for the beginning canoeist. Emphasis is placed on safe and correct handling of the canoe and rescue skills. Upon completion, students should be able to demonstrate basic canoeing, safe-handling, and self-rescue skills. (F)

PED 161 Canoeing-Rivers 0 2 1
Prerequisite: PED 160
This course provides practice in the basic skills of river and whitewater canoeing. Emphasis is placed on river running, safety, and care of equipment. Upon completion, students should be able to demonstrate navigation in a moving current, canoe safety, and self-rescue skills. (F)
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
<th>Type</th>
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</thead>
<tbody>
<tr>
<td>PED 170</td>
<td>Backpacking</td>
<td>0 2 1</td>
<td>F/S</td>
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<td>This course covers the proper techniques for establishing a campsite, navigating in the wilderness, and planning for an overnight trip. Topics include planning for meals, proper use of maps and compass, and packing and dressing for extended periods in the outdoors. Upon completion, students should be able to identify quality backpacking equipment, identify the principles of no-trace camping, and successfully complete a backpacking experience. (F/S)</td>
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<td>PED 175</td>
<td>Horseback Riding I</td>
<td>0 2 1</td>
<td>F/S</td>
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<td>This course introduces beginning and non-riders to recreational horseback riding. Topics include riding skills, equipment, handling of horses, mounting, care of the horse, and coordinated horse-rider balance. Upon completion, students should be able to demonstrate riding, safety, and horse management skills. (F/S)</td>
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<tr>
<td>PED 176</td>
<td>Horseback Riding II</td>
<td>0 2 1</td>
<td>F/S</td>
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<td>Prerequisite: PED 175</td>
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<td>This course is designed to give advanced riding experiences in a variety of specialized situations. Emphasis is placed on the development of skills such as jumping, rodeo games, and trail riding. Upon completion, students should be able to demonstrate control and management of the horse and perform various riding techniques. (F/S)</td>
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<tr>
<td>PED 180</td>
<td>Cycling</td>
<td>0 2 1</td>
<td>F/S</td>
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<td>This course is designed to promote physical fitness through cycling. Emphasis is placed on selection and maintenance of the bicycle, gear shifting, pedaling techniques, safety procedures, and conditioning exercises necessary for cycling. Upon completion, students should be able to demonstrate safe handling of a bicycle for recreational use. (F)</td>
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<td>PED 181</td>
<td>Snow Skiing-Beginning</td>
<td>0 2 1</td>
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<td>This course introduces the fundamentals of snow skiing. Topics include basic techniques, safety, and equipment involved in snow skiing. Upon completion, students should be able to ski a down slope, enter and exit a ski lift, and perform basic maneuvers on skis. (S)</td>
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<td>PED 182</td>
<td>Snow Skiing Intermediate</td>
<td>0 2 1</td>
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<td>Prerequisite: PED 181</td>
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<td>This course is designed to further develop snow skiing skills. Topics include selection and care of equipment, parallel skiing and turns, christies, advanced jumps, trail skiing, and slalom racing. Upon completion, students should be able to ski on varying terrains and snow conditions with control and safety. (S)</td>
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<tr>
<td>PED 183</td>
<td>Folk Dancing</td>
<td>0 2 1</td>
<td>F/S</td>
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<td>This course teaches the fundamental folk dance movements along with cultural traditions from various countries. Emphasis is placed on the history and traditions of the folk dance as well as the movements and the dances themselves. Upon completion, students should be able to demonstrate folk dances as well as knowledge of their origins and cultural traditions. (F/S)</td>
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271
PED 187    Social Dance-Beginning    0  2  1
This course introduces the fundamentals of popular social dances. Emphasis is placed on basic social dance techniques, dances, and a brief history of social dance. Upon completion, students should be able to demonstrate specific dance skills and perform some dances. (F/S)

PED 188    Social Dance-Intermediate    0  2  1
Prerequisite: PED 187
This course covers advanced fundamentals of social dancing. Topics include rhythm, appearance, and routine sequence. Upon completion, students should be able to perform more difficult steps and types of dances. (F/S)

PED 212    Snowboarding    0  2  1
This course is designed to develop the basic knowledge and skills of snowboarding. Topics include equipment, conditioning exercises, terminology, safety, rules, fundamental skills, and use of lifts. Upon completion, students should be able to snowboard downhill, enter and exit a ski lift and perform basic maneuvers on a board. This course has been approved to satisfy the Comprehensive Articulation Agreement and/or elective course requirement.

PED 240    Advanced PE Skills    0  2  1
This course provides those who have mastered skills in a particular physical education area the opportunity to assist with instruction. Emphasis is placed on methods of instruction, class organization, and progressive skill development. Upon completion, students should be able to design, develop, and implement a unit lesson plan for a skill they have mastered. This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement.

PED 250    Officiating/Bkball/Vball    1  2  2
This course introduces the rules and techniques for sports officiating in basketball and volleyball. Emphasis is placed on officiating fundamentals and responsibilities. Upon completion, students should be able to demonstrate proper mechanics and knowledge of officiating procedures in basketball and volleyball. (F/S)

PED 260    Lifeguard Training    1  2  2
Prerequisite: PED 153
This course covers the skills, knowledge, and techniques of lifesaving and lifeguarding. Topics include identifying and minimizing aquatic hazards, recognizing and effectively rescuing people in distress, and developing safety skills. Upon completion, students should be able to demonstrate skills, knowledge, and techniques of lifesaving and lifeguarding to pass American Red Cross lifeguarding certification. (F)
See the SEL and SEM prefixes for generic Selected Topics and Seminar course descriptions.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>PTA 110</td>
<td>Intro to Physical Therapy</td>
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<td>Prerequisite: Enrollment in the Physical Therapist Assistant program</td>
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<td>This course introduces the field of physical therapy including the history and standards of practice for the physical therapist assistant and basic treatment techniques. Emphasis is placed on ethical and legal considerations, universal precautions, vital signs, documentation, basic patient preparation and treatment skills, and architectural barrier screening. Upon completion, students should be able to explain the role of the physical therapist assistant and demonstrate competence in basic techniques of patient care. (F)</td>
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<tr>
<td>PTA 125</td>
<td>Gross &amp; Functional Anat</td>
<td>3 6 5</td>
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<td>Prerequisite: PTA 110</td>
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<td>Corequisites: PTA 135, PTA 165, PTA 222</td>
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<td>This course provides an in-depth, clinically oriented survey of gross and functional anatomy. Emphasis is placed on musculoskeletal and nervous systems and clinical biomechanics, including goniometry, basic manual muscle testing, and components of normal gait. Upon completion, students should be able to identify specific anatomical structures and describe, observe, and measure musculoskeletal posture and function. (S)</td>
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<td>PTA 135</td>
<td>Pathology</td>
<td>4 0 4</td>
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<td>Prerequisite: PTA 110</td>
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<td>Corequisites: PTA 125, PTA 165, PTA 222</td>
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<td>This course introduces principles of pathology, processes of and normal responses to injury and disease, and changes related to aging. Emphasis is placed upon conditions most commonly treated in physical therapy. Upon completion, students should be able to discuss basic pathological processes and identify etiology, signs, symptoms, complications, treatment options, and prognoses of specific orthopedic conditions. (S)</td>
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<tr>
<td>PTA 145</td>
<td>Therapeutic Procedures</td>
<td>2 6 4</td>
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<td></td>
<td>Prerequisites: PTA 125, PTA 135, PTA 165, PTA 222</td>
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<td>Corequisites: PED 110</td>
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<td>This course provides a detailed study of specific treatment procedures and the physiological principles and techniques involved. Emphasis is placed on the correct application of superficial heat and cold, massage and soft tissue mobilization, ultrasound, diathermy, traction, and electrical stimulation. Upon completion, students should be able to demonstrate competence in the application of these modalities and explain the indications, contraindications, effects, and precautions for each. (SS)</td>
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<tr>
<td>PTA 165</td>
<td>PTA Clinical I</td>
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<td>Prerequisite: PTA 110</td>
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<td>Corequisites: PTA 125, PTA 135, PTA 222</td>
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<td>This course provides the opportunity to gain clinical experience and apply academic skills and knowledge to patient care. Emphasis is placed on performing patient care skills, observation and measurement, and professional and patient interaction. Upon completion, students should be able to demonstrate safe and effective clinical practice as measured by a standardized performance evaluation. (S)</td>
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</table>
PTA 185  PTA Clinical II  
Prerequisite: PTA 145  
Corequisites: PTA 215, PTA 225, PTA 245  
This course provides the opportunity to gain clinical experience and apply academic skills and knowledge to patient care. Emphasis is placed on performing patient care skills, observation and measurement, and professional and patient interaction. Upon completion, students should be able to demonstrate safe and effective clinical practice as measured by a standardized performance evaluation. (F)

PTA 212  Health Care/Resources  
Prerequisites: PTA 185, PTA 215, PTA 225, PTA 245  
Corequisites: PTA 235, PTA 255, PTA 270  
This course provides an overview of various aspects of health care delivery systems and the interrelationships of health care team members. Topics include health agencies and their functions, health care team member roles, management, and other health care issues. Upon completion, students should be able to discuss the functions of health organizations and team members and aspects of health care affecting physical therapy delivery. (S)

PTA 215  Therapeutic Exercise  
Prerequisite: PTA 145  
Corequisites: PTA 185, PTA 225, PTA 245  
This course introduces basic concepts of strengthening, endurance, and flexibility exercise and balance, gait, and posture training. Emphasis is placed on applying techniques to the treatment of orthopedic conditions. Upon completion, students should be able to safely and effectively execute basic exercise programs and balance, gait, and posture training. (F)

PTA 222  Professional Interactions  
Prerequisite: PTA 110  
Corequisites: PTA 125, PTA 135, PTA 165  
This course is designed to assist in the development of effective interpersonal skills in the physical therapist assistant setting. Topics include reactions to disability, the grieving process, methods of communication, motivation, health promotion, disease prevention, and aging. Upon completion, students should be able to discuss and demonstrate methods for achieving effective interaction with patients, families, the public, and other health care providers. (S)

PTA 225  Intro to Rehabilitation  
Prerequisite: PTA 145  
Corequisites: PTA 185, PTA 215, PTA 245  
This course covers cardiovascular, pulmonary, and integumentary conditions, as well as causes and treatment of amputations. Emphasis is placed upon pathological processes as well as comprehensive treatment of the various conditions studied. Upon completion, students should be able to discuss etiology, signs, symptoms, complications, and prognoses of various conditions and implement components of a comprehensive treatment program. (F)
PTA 235  Neurological Rehab  
Prerequisites: PTA 185, PTA 215, PTA 225, PTA 245  
Corequisites: PTA 225, PTA 212, PTA 270  
This course covers neurological and neuromuscular conditions experienced throughout the life span. Topics include the pathology of selected conditions and the methods and rationales of various treatment approaches. Upon completion, students should be able to discuss etiology, signs, symptoms, complications, and prognoses of various conditions and implement components of a comprehensive treatment program. (S)

PTA 245  PTA Clinical III  
Prerequisite: PTA 145  
Corequisites: PTA 185, PTA 215, PTA 225  
This course provides the opportunity to gain clinical experience and apply academic skills and knowledge to patient care. Emphasis is placed on performing patient care skills, observation and measurement, and professional and patient interaction. Upon completion, students should be able to demonstrate safe and effective clinical practice as measured by a standardized performance evaluation. (F)

PTA 255  PTA Clinical IV  
Prerequisites: PTA 185, PTA 215, PTA 225, PTA 245  
Corequisites: PTA 235, PTA 212, PTA 270  
This course provides the opportunity to gain clinical experience and apply academic skills and knowledge to patient care. Emphasis is placed on performing patient care skills, observation and measurement, and professional and patient interaction. Upon completion, students should be able to demonstrate safe and effective clinical practice as measured by a standardized performance evaluation. (S)  
See the SEL and SEM prefixes for generic Selected Topics and Seminar course descriptions.

PTA 270  Physical Therapy Topics  
Prerequisites: PTA 185, PTA 215, PTA 225, PTA 245  
Corequisites: PTA 255, PTA 235, PTA 212  
This course covers the physical therapist assistant profession in preparation for the state licensure exam. Topics include developing time management skills and practicing for the competence examinations. Upon completion, students should be able to identify individual academic strengths and weaknesses and utilize this information to continue self-study for the licensure exam. (S)

Physics

PHY 101  Fundamentals of Physics I  
Prerequisite: MAT 070  
This course introduces fundamental physical concepts with emphasis on applications. 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 demonstrate an under-
standing of the principles studied as applied to their specific programs. This course is intended for certificate and diploma programs. (D)

**PHY 110  Conceptual Physics**  
3 0 3  
Prerequisites: MAT 080 and RED 090 or appropriate Math/ Reading Placement. 
Corequisite: PHY 110A 
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 has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in natural sciences/mathematics. (F)

**PHY 110A  Conceptual Physics Lab**  
0 2 1  
Corequisite: PHY 110 
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 has been approved to satisfy the Comprehensive Articulation Agreement general education core requirements in natural sciences/mathematics. (F)

**PHY 131  Physics-Mechanics**  
3 2 4  
Prerequisite: MAT 121 or MAT 171 
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. (F/S)

**PHY 151  College Physics I**  
3 2 4  
Prerequisite: MAT 161 or 171 
This course uses algebra and trigonometry-based mathematical models to introduce the fundamental concepts that describe the physical world. Topics include units and measurements, vectors, linear, kinematics and dynamics, energy, power, momentum, fluid mechanics, and heat. Upon completion, students should be able to demonstrate an understanding of the principles involved and display analytical problem-solving ability for the topics covered. This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in natural sciences/mathematics. (D)

**PHY 152  College Physics II**  
3 2 4  
Prerequisite: PHY 151 
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,
Upon completion, students should be able to demonstrate an understanding of the principles involved and display analytical problem-solving ability for the topics covered. This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in natural sciences/mathematics. (D)

PHY 251 General Physics I 3 3 4
Prerequisite: MAT 271
Corequisite: MAT 272
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 has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in natural sciences/mathematics. (F)

PHY 252 General Physics II 3 3 4
Prerequisites: MAT 272 and PHY 251
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 has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in natural sciences/mathematics. (S)

See the SEL and SEM prefixes for generic Selected Topics and Seminar course descriptions.

Plumbing

PLU 111 Intro to Basic Plumbing 1 3 2
This course introduces basic plumbing tools, materials, and fixtures. Topics include standard tools, materials, and fixtures used in basic plumbing systems and other related topics. Upon completion, students should be able to demonstrate an understanding of a basic plumbing system. (SS)
See the SEL and SEM prefixes for generic Selected Topics and Seminar course descriptions.

Political Science

POL 120 American Government 3 0 3
Prerequisite: Reading proficiency or RED 090
This course is a study of the origins, development, structure, and functions of
American national 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 formation. Upon completion, students should be able to demonstrate an understanding of the basic concepts and participatory processes of the American political system. This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in social/behavioral sciences. (F)

POL 130  State & Local Government  3 0 3
Prerequisite: Reading proficiency or RED 090
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. (S)

Professional Crafts

PCC 118  Clay: Special Study  0 4 2
This course provides a format in which to explore personal interests in clay with instructor supervision. Emphasis is placed on student proposals and student-instructor-developed contractual agreements specifying goals, deadlines, and evaluation criteria. Upon completion, students should be able to complete clay works as specified in student-instructor-designed contractual agreements. (D)
See the SEL and SEM prefixes for generic Selected Topics and Seminar course descriptions.

Psychology

PSY 101  Applied Psychology  3 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 intended for certificate and diploma programs. (S)

PSY 131  Psychology of Dreams  3 0 3
This course covers the physiology of sleeping and dreaming and the major psychological approaches to the interpretation of dreams. Topics include historical and cultural perspectives on dreams, sleep disorders, and an examination of traditional and contemporary approaches to dreams and their meaning. Upon completion, students should be able to demonstrate a basic understanding of the psychological implications of sleeping and dreaming.
PSY 150   General Psychology       3  0  3
Prerequisite: Reading proficiency or RED 090
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 has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in social/behavioral sciences. (F/S/SS)

PSY 237   Social Psychology       3  0  3
Prerequisites: PSY 150 or SOC 210 and Reading proficiency or RED 090
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. This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in social/behavioral sciences. (F)

PSY 241   Developmental Psych       3  0  3
Prerequisites: PSY 150 and Reading proficiency or RED 090
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. This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in social/behavioral sciences. (F/S)

PSY 255   Intro to Exceptionality   3  0  3
Prerequisites: PSY 150 and Reading proficiency or RED 090
This course introduces the psychology of the exceptional person. Topics include theoretical perspectives, terminology, and interventions pertaining to various handicapping conditions, as well as the resulting psychosocial adjustments. Upon completion, students should be able to demonstrate a basic understanding of the potentials and limitations of the exceptional person. (S)

PSY 265   Behavioral Modification   3  0  3
Prerequisites: PSY 150 and Reading proficiency or RED 090
This course is an applied study of factors influencing human behavior and strategies for behavioral change. Emphasis is placed on cognitive-behavioral theory, behavioral assessment, practical applications of conditioning techniques, and maintenance of adaptive behavior patterns. Upon completion, students should be able to implement basic learning principles to effect behavioral changes in self and others. (D)

PSY 281   Abnormal Psychology      3  0  3
Prerequisites: PSY 150 and Reading proficiency or RED 090
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. This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in social/behavioral sciences. (SS)

See the SEL and SEM prefixes for generic Selected Topics and Seminar course descriptions.

## Radiography

**RAD 110**  
Rad Intro & Patient Care  
2 3 3  
Prerequisite: Enrollment in Radiography program  
Corequisites: RAD 111 and RAD 151  
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. (F)

**RAD 111**  
RAD Procedures I  
3 3 4  
Prerequisite: Enrollment in the Radiography program  
Corequisites: RAD 110 and RAD 151  
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. (F)

**RAD 112**  
RAD Procedures II  
3 3 4  
Prerequisites: RAD 110, RAD 111, and RAD 151  
Corequisites: RAD 121 and RAD 161  
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. (S)

**RAD 121**  
Radiographic Imaging I  
2 3 3  
Prerequisites: RAD 110, RAD 111, and RAD 151  
This course covers factors of image quality and methods of exposure control. Topics include density, contrast, recorded detail, distortion, technique charts, manual and automatic exposure control, and tube rating charts. Upon completion, students should be able to demonstrate an understanding of exposure control and the effects of exposure factors on image quality. (S)
RAD 122 Radiographic Imaging II
Prerequisites: RAD 112, RAD 121, and RAD 161
Corequisites: RAD 131 and RAD 171
This course covers image receptor systems and processing principles. Topics include film, film storage, processing, intensifying screens, grids, and beam limitation. Upon completion, students should be able to demonstrate the principles of selection and usage of imaging accessories to produce quality images. (SS)

RAD 131 Radiographic Physics I
Prerequisites: RAD 112, 121, and 161
Corequisites: RAD 122 and RAD 171
This course introduces the fundamental principles of physics that underlie diagnostic X-ray production and radiography. Topics include electromagnetic waves, electricity and magnetism, electrical energy, and power and circuits as they relate to radiography. Upon completion, students should be able to demonstrate an understanding of basic principles of physics as they relate to the operation of radiographic equipment. (S)

RAD 151 RAD Clinical Ed I
Prerequisite: Enrollment in the Radiography program
Corequisites: RAD 110 and RAD 111
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. (F)

RAD 161 RAD Clinical Ed II
Prerequisites: RAD 110, RAD 111, and RAD 151
Corequisites: RAD 112 and RAD 121
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. (S)

RAD 171 RAD Clinical Ed III
Prerequisites: RAD 112, RAD 121, and RAD 161
Corequisites: RAD 122 and RAD 131
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. (SS)

RAD 211 RAD Procedures III
Prerequisite: RAD 122
Corequisites: RAD 231, RAD 241, and RAD 251
This course provides the knowledge and skills necessary to perform standard and spe-
cialty radiographic procedures. Emphasis is placed on radiographic specialty procedures, pathology, and advanced imaging. Upon completion, students should be able to demonstrate competence in these areas. (F)

RAD 231 Radiographic Physics II 1 3 2
Prerequisite: RAD 171
Corequisites: RAD 211, RAD 241, and RAD 251
This course continues the study of physics that underlie diagnostic X-ray production and radiographic and fluoroscopic equipment. Topics include X-ray production, electromagnetic interactions with matter, X-ray devices, equipment circuitry, targets, filtration, and dosimetry. Upon completion, students should be able to demonstrate an understanding of the application of physical concepts as related to image production. (F)

RAD 241 Radiation Protection 2 0 2
Prerequisites: RAD 122, RAD 131, and RAD 171
Corequisites: RAD 211, RAD 231, and RAD 251
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. (F)

RAD 245 Radiographic Analysis 2 3 3
Prerequisite: RAD 251
Corequisite: RAD 261
This course provides an overview of imaging concepts and introduces methods of quality assurance. Topics include a systematic approach for image evaluation and analysis of imaging service and quality assurance. Upon completion, students should be able to establish and administer a quality assurance program and conduct a critical review of images. (S)

RAD 251 RAD Clinical Ed IV 0 21 7
Prerequisites: RAD 122, RAD 131, and RAD 171
Corequisites: RAD 211, RAD 231, and RAD 241
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. (F)

RAD 261 RAD Clinical Ed V 0 21 7
Prerequisite: RAD 251
Corequisite: RAD 245
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. (S)
Reading

Initial student placement in developmental courses is based on individual college placement testing policies and procedures. Students should begin developmental course work at the appropriate level indicated by that college’s placement test.

**RED 080 Intro to College Reading**

Prerequisite: RED 070 or ENG 075 or Reading Placement Score

This course introduces effective reading and inferential thinking skills in preparation for RED 090. Emphasis is placed on vocabulary, comprehension, and reading strategies. Upon completion, students should be able to determine main ideas and supporting details, recognize basic patterns of organization, draw conclusions, and understand vocabulary in context. This course does not satisfy the developmental reading prerequisite for ENG 111 or ENG 111A. (F/S/SS)

**RED 090 Improved College Reading**

Prerequisites: RED 080 or ENG 085 or Reading Placement Score

This course is designed to improve reading and critical thinking skills. Topics include vocabulary enhancement; extracting implied meaning; analyzing author's purpose, tone, and style; drawing conclusions and responding to written material. Upon completion, students should be able to comprehend and analyze college-level reading material. This course satisfies the developmental reading prerequisite for ENG 111 or ENG 111A. (F/S/SS)

Religion

**REL 110 World Religions**

Prerequisite: Reading proficiency or RED 090

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. The Chinese traditions of Taoism and Confucianism will also be covered. This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in humanities/fine arts. (F/S)

**REL 211 Intro to Old Testament**

Prerequisite: Reading proficiency or RED 090

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. This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in humanities/fine arts. (F/S)
REL 212 Intro to New Testament 3 0 3
Prerequisite: Reading proficiency or RED 090
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. All New Testament books will be covered. This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in humanities/fine arts. (F/S)

REL 221 Religion in America 3 0 3
Prerequisite: Reading proficiency or RED 090
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. This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in humanities/fine arts. (F/S)
See the SEL and SEM prefixes for generic Selected Topics and Seminar course descriptions.

Selected Topics

The appropriate curriculum prefix should be substituted for SEL. For example, Selected Topics in English would use the ENG prefix. The complete course title would substitute the curriculum area for the blank. A first-year one credit English selected topics course would be ENG 191 Selected Topics in English.

SEL 191 Selected Topics in 0-1 0-3 1
This course provides an opportunity to explore areas of current interest in specific program or discipline areas. Emphasis is placed on subject matter appropriate to the program or discipline. Upon completion, students should be able to demonstrate an understanding of the specific area of study.

SEL 192 Selected Topics in 0-2 0-6 2
This course provides an opportunity to explore areas of current interest in specific program or discipline areas. Emphasis is placed on subject matter appropriate to the program or discipline. Upon completion, students should be able to demonstrate an understanding of the specific area of study.

SEL 193 Selected Topics in 1-3 0-6 3
This course provides an opportunity to explore areas of current interest in specific program or discipline areas. Emphasis is placed on subject matter appropriate to the program or discipline. Upon completion, students should be able to demonstrate an understanding of the specific area of study.
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<tr>
<th>Course Code</th>
<th>Title</th>
<th>Credits</th>
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<tr>
<td>SEL 291</td>
<td>Selected Topics in</td>
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<td>This course provides an opportunity to explore areas of current interest in specific program or discipline areas. Emphasis is placed on subject matter appropriate to the program or discipline. Upon completion, students should be able to demonstrate an understanding of the specific area of study.</td>
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<td>SEL 292</td>
<td>Selected Topics in</td>
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<td>This course provides an opportunity to explore areas of current interest in specific program or discipline areas. Emphasis is placed on subject matter appropriate to the program or discipline. Upon completion, students should be able to demonstrate an understanding of the specific area of study.</td>
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<td>SEL 293</td>
<td>Selected Topics in</td>
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<td>SEM 196</td>
<td>Seminar in</td>
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<td>This course provides an opportunity to explore topics of current interest. Emphasis is placed on the development of critical listening skills and the presentation of seminar issues. Upon completion, students should be able to critically analyze issues and establish informed opinions.</td>
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<tr>
<td>SEM 197</td>
<td>Seminar in</td>
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<tr>
<td>SEM 198</td>
<td>Seminar in</td>
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<td>This course provides an opportunity to explore topics of current interest. Emphasis is placed on the development of critical listening skills and the presentation of seminar issues. Upon completion, students should be able to critically analyze issues and establish informed opinions.</td>
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<tr>
<td>SEM 296</td>
<td>Seminar in</td>
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<td>This course provides an opportunity to explore topics of current interest. Emphasis is placed on the development of critical listening skills and the presentation of seminar issues. Upon completion, students should be able to critically analyze issues and establish informed opinions.</td>
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<td>SEM 297</td>
<td>Seminar in</td>
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### Sociology

**SOC 210**  
Introduction to Sociology  
Prerequisite: Reading proficiency or RED 090  
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 has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in social/behavioral sciences. (F/S)

**SOC 213**  
Sociology of the Family  
This course covers the institution of the family and other intimate relationships. Emphasis is placed on mate selection, gender roles, sexuality, communication, power and conflict, parenthood, diverse lifestyles, divorce and remarriage, and economic issues. Upon completion, students should be able to analyze the family as a social institution and the social forces which influence its development and change. This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in social/behavioral sciences. (F/S)

**SOC 220**  
Social Problems  
Prerequisite: Reading proficiency or RED 090  
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. This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in social/behavioral sciences. (F/S)

See the SEL and SEM prefixes for generic Selected Topics and Seminar course descriptions.

### Spanish

**SPA 111**  
Elementary Spanish I  
Corequisite: SPA 181  
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. This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in humanities/fine arts. (D)

SPA 112  Elementary Spanish II  3  0  3
Prerequisite: SPA 111
Corequisite: SPA 182
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. This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in humanities/fine arts. (D)

SPA 161  Cultural Immersion  2  3  3
Prerequisite: SPA 111
This course explores Hispanic culture through intensive study on campus and field experience in a host country or area. Topics include an overview of linguistic, historical, geographical, sociopolitical, economic, and/or artistic concerns of the area visited. Upon completion, students should be able to exhibit first-hand knowledge of issues pertinent to the host area and demonstrate understanding of cultural differences. This course has been approved to satisfy the Comprehensive Articulation Agreement pre-major and/or elective course requirement. (D)

SPA 181  Spanish Lab 1  0  2  1
Corequisite: SPA 111
This course provides an opportunity to enhance acquisition of the fundamental elements of the Spanish language. Emphasis is placed on the progressive development of basic listening, speaking, reading, and writing skills through the use of various supplementary learning media and materials. Upon completion, students should be able to comprehend and respond with grammatical accuracy to spoken and written Spanish and demonstrate cultural awareness. (D)

SPA 182  Spanish Lab 2  0  2  1
Prerequisite: SPA 181
Corequisite: SPA 112
This course provides an opportunity to enhance acquisition of the fundamental elements of the Spanish language. Emphasis is placed on the progressive development of basic listening, speaking, reading, and writing skills through the use of various supplementary learning media and materials. Upon completion, students should be able to comprehend and respond with increasing proficiency to spoken and written Spanish and demonstrate cultural awareness. (D)
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<th>Course Code</th>
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<th>Notes</th>
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<tr>
<td>SPA 211</td>
<td>Intermediate Spanish I</td>
<td>3</td>
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<td>Prerequisite: SPA 112</td>
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<td>Corequisite: SPA 251</td>
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<td>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. This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in humanities/fine arts. (D)</td>
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<tr>
<td>SPA 212</td>
<td>Intermediate Spanish II</td>
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<td>Prerequisite: SPA 211</td>
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<td></td>
<td>Corequisite: SPA 282</td>
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<td>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. This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in humanities/fine arts. (D) See the SEL and SEM prefixes for generic Selected Topics and Seminar course descriptions.</td>
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<td>SPA 281</td>
<td>Spanish Lab</td>
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<td>Prerequisite: SPA 182</td>
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<td>Spanish Lab</td>
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<td>SLP 111</td>
<td>Ethics and Standards for SLPA</td>
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<td>This course provides an overview of the theory, practice, and philosophy of speech-language pathology assisting. Topics include legal and ethical issues, scope of practice, multiculturalism, and diversity. Upon completion, students should be able to describe characteristics of the profession and identify components of safe and ethical practice. (SS)</td>
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<td>SLP 112</td>
<td>SLP Anatomy &amp; Physiology</td>
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<td><strong>Prerequisites:</strong> BIO 163, BIO 166, or BIO 169</td>
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<td>This course introduces the basic pathophysiology of the orofacial and thoracic structures of the human body. Emphasis is placed on the most commonly treated speech, language, and hearing disorders. Upon completion, students should be able to identify and describe basic pathophysiology related to the production of speech and hearing. (SS)</td>
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<td>SLP 120</td>
<td>SLPA Administrative Procedures and Mngt.</td>
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<td><strong>Prerequisite:</strong> SLP 111</td>
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<td>This course covers organizational and functional skills appropriate to the speech-language pathology workplace. Emphasis is placed on scheduling, office etiquette, operation of office equipment, time management, and quality issues. Upon completion, students should be able to demonstrate correct operation of office equipment and work cooperatively and effectively within the speech-language pathology professional environment. (F)</td>
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<tr>
<td>SLP 130</td>
<td>Phonetics/Speech Patterns</td>
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<td><strong>Prerequisite:</strong> SLP 111</td>
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<td>This course introduces the International Phonetic Alphabet and the categories of speech sounds, including voice, place, and manner of production. Emphasis is placed on the accurate transcription of normal and abnormal speech samples using the IPA and on the production of effective natural speech. Upon completion, students should be able to transcribe and categorize speech sounds and understand the relationship between respiration, articulation and phonation during natural speech. (SS)</td>
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<tr>
<td>SLP 140</td>
<td>Normal Communication</td>
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<td><strong>Prerequisite:</strong> SLP 111</td>
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<td>This course introduces normal verbal and non-verbal communications across the life span, including appropriate social interaction with diverse populations. Topics include normal speech, language, and hearing in a multicultural society and an introduction to screening for normality and abnormality. Upon completion, students should be able to identify normal speech, language, and hearing patterns. (F)</td>
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<td>SLP 211</td>
<td>Developmental Disorders</td>
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<td></td>
<td><strong>Prerequisites:</strong> SLP 111, SLP 112, SLP 130, and SLP 140</td>
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<td>This course covers screening for speech, language, and hearing disorders; use of observational checklists; and administration of therapeutic protocols. Emphasis is placed on conditions commonly treated in speech-language pathology. Upon completion, students should be able to accurately administer screening tests and therapeutic protocols and identify characteristics of developmental speech, language, and hearing disorders. (F)</td>
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<tr>
<td>SLP 212</td>
<td>Acquired Disorders</td>
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<tr>
<td></td>
<td><strong>Prerequisite:</strong> SLP 111 and SLP 112 and SLP 130 and SLP 140</td>
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<td>This course is a continuation of SLP 211 and includes an introduction to clinical settings. Emphasis is placed on acquired conditions commonly treated in speech-language pathology. Upon completion, students should be able to accurately administer screen-</td>
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</table>
ing tests and therapeutic protocols and identify characteristics of acquired speech, lan-
guage, and hearing disorders. (S)

**SLP 220  Assistive Technology**  
Prerequisites: SLP 111, SLP 130, and SLP 140  
Corequisite: SLP 211  
This course introduces the preparation, use, and maintenance of selected communication equipment in the treatment of respective disorders. Emphasis is placed on the collaborative use of assistive equipment for speech, language, and hearing disorders. Upon completion, students should be able to instruct the patient and caregiver in the use and maintenance of assistive communication equipment. (F)

**SLP 230  SLPA Fieldwork**  
Prerequisite: SLP 211  
Corequisites: SLP 212 and SLP 231  
This course provides supervised fieldwork experience in speech-language pathology assisting in a minimum of two diverse sites. Emphasis is placed on the use of written protocols in providing patient care. Upon completion, students should be able to integrate ethical concepts into safe and effective clinical practice. (S)

**SLP 231  SLPA Fieldwork Seminar**  
Prerequisite: SLP 211  
Corequisites: SLP 212 and SLP 230  
This course provides an opportunity to discuss fieldwork experiences with peers and faculty. Emphasis is placed on management of clinical problems, conflict resolution, and job seeking and retention skills. Upon completion, students should be able to meet entry-level requirements for speech-language pathology assistants. (S)

See the SEL and SEM prefixes for generic Selected Topics and Seminar course descriptions.

**Surveying Technology**

**SRV 110  Surveying I**  
Prerequisite: EGR 115 and MAT 121  
This course introduces the theory and practice of plane surveying. Topics include measuring distances and angles, differential and profile leveling, compass applications, topography, and mapping. Upon completion, students should be able to use/care for surveying instruments, demonstrate field note techniques, and apply the theory and practice of plane surveying. (S)

**SRV 111  Surveying II**  
Prerequisite: SRV 110  
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. (F)
SRV 112 Landscape Arch Surveying 2 6 4
Prerequisite: MAT 101
This course covers surveying techniques commonly used by landscape architects and contractors. Topics include boundary and topographic surveying. Upon completion students should be able to create boundary and topo maps and layout construction projects both on paper and in the field. (D)

SRV 210 Surveying III 2 6 4
Prerequisite: SRV 110
This course introduces boundary surveying, land partitioning, and calculations of areas. Topics include advanced traverses and adjustments, preparation of survey documents, and other related topics. Upon completion, students should be able to research, survey, and map a boundary. (S)

SRV 220 Surveying Law 2 2 3
Prerequisite: SRV 110
This course introduces the law as related to the practice of surveying. Topics include surveyors’ responsibilities, deed descriptions, title searches, eminent domain, easements, weight of evidence, riparian rights, and other related topics. Upon completion, students should be able to identify and apply the basic legal aspects associated with the practice of land surveying. (F)

SRV 230 Subdivision Planning 1 6 3
Prerequisite: SRV 111, SRV 210 and CIV 211
This course covers the planning aspects of residential subdivisions from analysis of owner and municipal requirements to plat layout and design. Topics include municipal codes, lot sizing, roads, incidental drainage, esthetic considerations, and other related topics. Upon completion, students should be able to prepare a set of subdivision plans. (SS)

SRV 240 Topo/Site Surveying 2 6 4
Prerequisite: SRV 110
This course covers topographic, site, and construction surveying. Topics include topographic mapping, earthwork, site planning, construction staking, and other related topics. Upon completion, students should be able to prepare topographic maps and site plans and locate and stake out construction projects. (S)

SRV 250 Advanced Surveying 2 6 4
Prerequisite: SRV 111
This course covers advanced topics in surveying. Topics include photogrammetry, astronomical observations, coordinate systems, error theory, GPS, GIS, Public Land System, and other related topics. Upon completion, students should be able to apply advanced techniques to the solution of complex surveying problems. (D)

SRV 260 Field & Office Practices 1 3 2
This course covers surveying project management, estimating, and responsibilities of
surveying personnel. Topics include record-keeping, starting and operating a surveying business, contracts, regulations, taxes, personnel management, and professional ethics. Upon completion, students should be able to understand the requirements of operating a professional land surveying business. (D)

**Truck Driver Training**

TRP 100  Truck Driver Training  6  18  12
This course provides training in inspecting and driving tractor trailers and assuming driver responsibilities on the road and at pickup and delivery points. Emphasis is placed on defensive driving, federal motor carrier safety regulations, trip planning, cargo handling, vehicle systems, hours of service, and accident prevention. Upon completion, students should be able to demonstrate the skills required for the commercial driver’s license and employment. This is a certificate-level course. (F/S/SS)

**Welding**

WLD 112  Basic Welding Processes  1  3  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  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.
The Corporate and Continuing Education Department at Caldwell Community College and Technical Institute seeks to provide relevant, high-quality instruction to meet the needs and interests of businesses, industries, agencies, and the community. The department is dedicated to serving all adults in their pursuit of employment skills, discovery of new and emerging technologies, and commitment to lifelong learning.

Mission

To provide accessible, quality educational instruction in occupational courses to individuals who seek to enhance their employment skills and to offer a variety of community service and self-supporting courses to individuals and to the community for personal enrichment.

Goals

- To become leading providers of workforce skills training;
- To use the best technology available to prepare the workforce;
- To partner with other organizations to encourage economic development and job training;
- To help adults access further educational pursuits by developing lifelong learning opportunities;
- To respond to the immediate and future training needs of businesses, industries, and agencies;
- To react timely and positively to internal and external customers.

Occupational Training

“Workforce Preparedness for Today and Tomorrow”

Occupational Training Programs provide opportunities for citizens to prepare for new occupations or upgrade their knowledge and skill in their current employment. The opportunities are provided through single courses or a series of courses specifically designed for an occupation. The courses are offered in technical or vocational occupations and vary in
length according to the complexity of the skill and the need of the employee or employer. Occupational courses can be developed upon request for a group or an employer and taught at a time and place convenient to those requesting instruction. Through these program areas certification, recertification, and short-term skills training are provided.

A variety of courses are provided for the professional development of individuals who need additional skills, upgraded skills, or new skills in these areas. Although degrees are not awarded for completion of continuing education courses, certificates are provided and students may be certified by the class or may be prepared for testing and certification, i.e. state certification or apprenticeship programs. Courses include, but are not limited to, the following:

**Certification and Licensure**

**Escort Driver Certification**
This 12-hour course satisfies the requirements set by the NCDOT to certify Oversize – Overweight load escort vehicle drivers. Defensive driving, escort driver requirements, skills training, and an examination are the components of the course. The NCDOT will issue a certificate for those attending the course and scoring 75% or higher on the end of course examination.

**Motor Vehicle Independent Dealer License–Renewal**
The six hours of training required for renewal of the motor vehicle independent dealer license is satisfied by successful completion of this course. A variety of topics will be covered with a minimum of two hours of training being devoted to current Department of Motor Vehicles issues. Positive identification is required to receive credit for attending the course.

**Notary Public Education**
Notary Public Education provides individuals with the opportunity to become or renew their standing as a Notary with the state of North Carolina. This course of study meets the state guidelines for instruction.

**Vehicle Safety Inspection Course**
CCC&TI offers the 8-hour course of instruction for certification or renewal as a North Carolina Vehicle Safety Inspector. Individuals meeting the state requirements and successfully completing the end of course test will be designated as a North Carolina Safety Inspector.

**Customer Service Training**
CCC&TI has developed a unique 96-hour course that covers all aspects of customer service including telephone skills, appropriate business dress, handling upset clients, difficult situations and proper responses for business conducted over the internet.
Tanning Booth Operator Training
Effective January 1, 1993, the Division of Radiation Protection in Raleigh requires any person operating a tanning bed in North Carolina be at least 18 years of age and be certified. The course is designed to instruct the student on the proper and safe way to operate a tanning bed.

Nail Technology
The 300-hour course is designed to prepare students to take the state board examination to become a licensed manicurist through the NC Board of Cosmetic Art. Topics covered during the course include the professional image, manicuring and pedicuring, bacteriology, sanitation and disinfecting, nail product chemistry, anatomy and physiology, OSHA safety regulations, disorders of the nail, acrylic nails, nail wraps, gel nails, silk wraps, nail art, nail enhancements, nail piercing, nail jewelry and nail appliques.

Teacher Assistant Institute
The Teacher Assistant Intitute meets the “No child Left Behind” Act qualifications and is designed to meet the needs of current and prospective paraprofessionals. Note: Additional courses may be approved.

Requirements for the teacher Assistant Institute are:
- A 12-hour WorkKeys preparation, review, and assessments in Math, Reading, Writing
- Two 48-hour approved continuing education courses or four 24-hour approved online courses

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<tr>
<th>Term</th>
<th>Course</th>
<th>Hours</th>
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<tr>
<td>Spring Jan-May</td>
<td>Teacher Assistant Course - Methodology/Curriculum Development</td>
<td>48</td>
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<tr>
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<td>Online courses begin the third Wednesday of every month.</td>
<td>24</td>
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<td></td>
<td>WorkKeys Prep and Assesment</td>
<td>12</td>
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<tr>
<td>Summer June-Aug</td>
<td>Teacher Assistant Course – Methodology/Curriculum Development</td>
<td>48</td>
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<td>School Health Assistant</td>
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<tr>
<td></td>
<td>Teacher Assistant Course – Classroom Management</td>
<td>48</td>
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(Each course will be offered M-Th, 6 hours)
per day for two weeks – summer term only)

Online courses begin the third Wednesday of every month. 24

<table>
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<td>Fall</td>
<td>Teacher Assistant Course – Classroom Management</td>
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<td></td>
<td>School Health Assistant</td>
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<tr>
<td>Sept-Dec</td>
<td>Online courses begin the third Wednesday of every month.</td>
<td>24</td>
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<tr>
<td></td>
<td>WorkKeys Prep and Assessment</td>
<td>12</td>
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**Insurance Institute**
The 48-hour Insurance Pre-Licensing course is required to sit for the state-licensing exam through the N.C. Department of Insurance. Pre-licensing courses for both Property/Casualty and Life, Accident and Health are offered. Successful passing rate on the state exam qualifies an individual to enter the insurance field as an agent. A 12-hour insurance continuing education course is also offered to meet the state licensing renewal requirements through the NC Department of Insurance.

**International Executive Housekeepers Association Certificate**
The executive housekeeping course series is an approved program sponsored by the International Executive Housekeepers Association and is part of the 330-hour certificate. Persons select those courses associated with their job or a group of up to 16 classes to prepare a specialized study in hotel management.

**American Culinary Federation Chef/Cook Certification**
The American Culinary Federation Chef/Cook Certification consists of three 30-hour courses: supervision and human relations, sanitation and safety, and nutrition. The courses are required to be certified at any level from cook to executive chef. Certification is granted through American Culinary Federation (ACF) High Country Chef’s Association. Minimum requirements: Cooks- 2 years full-time cooking experience; Chefs- 5 years supervisory cooking experience; High School Diploma or GED.
EPA Refrigerant Recovery/Recycling Certification
This course is designed to aid technicians in preparing to take the CFC recovery/recycling certification examination. The certification examination will be offered as a part of this course and forwarded to the NC Board of Refrigeration Examiners.

Wastewater Treatment Plant Operator
This course follows the prescribed training to meet certification requirements of, and approved by, the North Carolina Water Pollution Control System Operator’s Certification Commission. The course is divided into two 78-hour courses as Grade I & II, and Grade III & IV.

Corporate Computer Training Center
"Making Technology Work For You"

The Corporate Computer Training Center offers computer instruction for adults who want to increase their knowledge of computers. Training is designed to produce immediate productivity with the software package being taught. The center focuses on updated computer instruction to match the release of new software and to address the specific application needs of students. Services offered include current computer application training and customized computer applications. Courses are available for businesses, industries, agencies, and the general public.

Computer Services

Beginning Internet
This course is designed for students interested in gaining a basic understanding of Internet applications. Students will learn to navigate the Internet, download files, and utilize information. Experience with the mouse is recommended.

Beginning Windows
This is an ideal course for the student who is upgrading an earlier version of Windows. The student will learn to navigate the Windows operating system to perform daily tasks. Students should have basic keyboarding skills.

I Know Nothing About Computers
This is an ideal course for the student who has never used a computer. The student will learn to navigate the Windows operating system to perform daily tasks. Students should have basic keyboarding skills.

Access
This course covers creating a database form, editing and printing databases, searching and sorting a database; using filters and queries, and generating reports;
creating, modifying and printing, building forms with subforms and other controls.

**Advanced Web Site Development**
This class covers storyboarding, including navigational options, HTML, DHTML, Java Script, Java Applets, XML, cookies, publishing a web site; internal versus external hosting, techniques for promoting websites.

**Excel**
This course covers how to create, save and edit a worksheet as well as features such as freezing, titles, sorting, multiple calculations, formulas and functions, edit, print options, formula and template construction, working with workbooks, logical functions, autoformat, protecting and hiding data, creating charts and graphs, filtering data and using filters.

**Beginning Web Page Development**
This course covers basic web page design, including using a word processor (MS Word) and a web editor (Front Page). Topics include color consistency, image relevance, visual balance and clarity.

**Intermediate Web Page Development**
This course covers scanned and digital images, animation, hyperlinks, text and graphics, frames and applets.

**Internet Applications**
This course covers browsers and search engines, links, advanced searches and boolean operators, online reference services, validity of information, privacy and security issues, ethics, copyright, legal issues and e-mail features.

**CISCO Networking Academy**
CISCO training consists of a series of four 64-hour courses. Course topics covered include basic electronics, network wiring, router, switch, hub configurations and protocols used in internetworking and broadband. Students are prepared for the CISCO Certified Network Administrator (CCNA) certification from CISCO systems. They will be able to set up, design, implement and manage local to worldwide networks. There are no prerequisites; however A+, Microsoft Office skills, Windows, and basic electronics are helpful.

**A+/PC Repair**
This 32-hour hands-on course covers basic electronics, computer design, all hardware and associated software. Students will learn how to format a hard drive and upgrade RAM and be capable of taking the computer down to the component level and rebuild back to a working unit. This training prepares the student for the A+ certification examination through COMPtia. The exam is proof of compe-
tency in CPU, monitor, printers, basic networks, DOS and Windows. Students will be able to troubleshoot and repair any PC problem. Prerequisites: Windows/DOS, basic electronics is required; mechanical ability helpful.

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**Fire, Rescue, EMS**

**Firefighter I / II**
Firefighter I & II is a series of courses developed by the NC Department of Insurance, Fire and Rescue Commission. Successful completion of the courses required for each level will certify the firefighter at either Level I or II. Examples of courses offered in the series are Ladders, Fire Behavior, Forcible Entry, Fire Control and Water Supplies. Fee is waived for all students affiliated with a paid or volunteer fire department. Prerequisites: Must be 18 prior to certification as a firefighter, but may begin training at the age of 16; must have a high school diploma or GED.

**Rescue Technician**
The Rescue Technician is a series of courses approved by the North Carolina Department of Insurance, Fire and Rescue Commission. Successful completion of the courses required for RT will then certify the rescue worker. Examples of the courses offered in the series are General Search Management & Helicopter Transport. Fee is waived for all students affiliated with a paid or volunteer rescue department. Prerequisites: Must be 18 prior to certification as ERT, but may begin training at the age of 16; must have a high school diploma or GED.

**Hazardous Materials**
Hazardous Materials is a series of courses approved by the NC Department of Insurance. Hazardous Materials Level I certification requires completion of the Hazardous Materials Awareness and Operations/Terrorism. A Hazardous Materials Level I certification is required for Firefighter Level II and Rescue Technician. The awareness course provides the responder with knowledge and skills needed for detecting and identifying hazardous materials and initiating the incident command system. The operations course trains the responder to understand and interpret the basic hazards of the chemical incident and to make proper risk assessment within the limitations of equipment, resources, training, and personnel on hand. Prerequisites: Must be 18 prior to certification; must have a high school diploma or GED.

**Medical Responder**
This is an entry-level course for state certification. This course prepares students to perform Basic Life Support skills to assist Emergency Medical Technicians in the field. Skills developed are patient assessment, CPR, splinting and hemorrhage control. Prerequisites: Must be 18 years of age; high school diploma, GED, or successful completion of an exam assessing basic reading comprehension skills at a minimum at the tenth-grade level.
EMT-Basic
This is the first level for the Emergency Medical Technician in preparation to take the NCOEMS or NR examination. This course prepares students for basic prehospital emergency care such as treatment for shock, bleeding, burns, poisonings, childbirth, pediatric emergencies, CPR, use of ambulance equipment and communications to the emergency department. Prerequisites: Must be 18 years of age; high school diploma, GED, or successful completion of an exam assessing basic reading comprehension skills at a minimum at the tenth-grade level.

EMT-Intermediate
This course prepares the EMT to be able to perform skills such as intravenous medication administration, inhalation medication administration, use of blind insertion airway devices and subcutaneous injection. Prerequisites: Successful completion of the EMT Basic course, high school diploma or GED, reading comprehension and English language skills on the post-secondary level, and compliance with the mathematical skills on the high school grade level.

EMT-Paramedic
This course prepares the EMT to be able to perform skills such as endotracheal intubation, use of drugs for pain, and manual defibrillation. Prerequisites: Successful completion of the EMT Basic course, Anatomy and Physiology course, high school diploma or GED, reading comprehension and English language skills on the post-secondary level, and compliance with the mathematical skills on the high school grade level.

CPR
This course is designed to instruct students in cardiopulmonary resuscitation with an emphasis on prevention through changes in lifestyles. Successful completion of the course will result in certification from the American Heart Association.

First Aid
This course covers the basics of first aid, including what to look for prior to giving care to ensure patient safety. Skills learned include bleeding control, basic splinting and caring for shock and diabetic emergencies. First aid classes can be customized to meet the individual and/or group needs.

Health Services
Assistive Technology
The Partners in Assistive Technology Training and Services (PATTS) four-course series is designed to address continuing education needs for professionals and paraprofessionals in assistive technology related disciplines. This includes physical therapy, occupational therapy, speech-language pathology, special education,
rehabilitation counseling and case management. Persons with disabilities, families and caregivers are welcome to enroll in any of the courses. The area of assistive technology is ever changing and expanding rapidly. New assistive devices are being developed, manufactured and marketed to provide assistance to persons with disabilities. The PATTS curriculum is delivered in four, 24-hour courses using a distance-learning format. Upon successful completion of the four-course series, participants will receive a Certificate in Assistive Technology. Other individuals are encouraged to participate in one or more courses to enhance their understanding of assistive technology. For more information, visit our web site www.patts.org

**Course 1 – AT: Framing the Questions**
This course provides an overall view of Assistive Technology, with an introduction to disabilities, the need for AT, the types of equipment considered to be AT, the process by which such equipment is acquired and used and an introduction to cross discipline awareness and quality assurance. Information regarding state and federal regulations governing AT application will be presented. Topics include: what is AT, who uses AT, who provides AT, what does AT use (the SETT framework), what does AT use (computers, switches and controls), and how do legal policies affect AT.

**Course 2 – AT: Enhancing the User**
Information will be shared about impairments and disabilities which may result in the need for AT. Technologies will be described which allow AT users to overcome disabilities by capitalizing on strengths and abilities. Topics include: impairment, disability and handicap, seating and positioning, mobility and orthotics, vision, hearing, and communication.

**Course 3 – AT: Enhancing the Environment**
The third course examines technologies, which make living, learning, work and play environments more accessible by persons with disabilities. Funding AT is the final but very important lesson in this course. Topics include: computer access/software applications, work/home/vehicle modifications, aids for daily living, accessible recreation, and funding.

**Course 4 – AT: Making AT Work**
Course 4 provides hands-on experience with various types of assistive technology. The student will learn to identify the presence of positioning problems which impede AT use, make simple AT devices from commonplace materials, make communication displays and program communication devices, and become familiar with tools for creating computer based learning experiences. Topics include: seating and mobility: trouble shooting, creating simple AT devices, setting up commercial AT devices, communication display software: using Boardmaker, making overlays and programming communication devices, and introduction Intellikeys.
Phlebotomy
This 148-hour prepares students to draw blood specimens from patients to be of analyzed. The course covers issues such as equipment maintenance, appropriate communication skills when working with patients, proper selection of venipuncture sites, care of blood specimens, data entry, as well as clerical duties associated with record keeping. Upon successful completion, students will be prepared to sit for the national examination and be qualified as a certified phlebotomist.
Prerequisites: High school diploma or GED; 18 years of age.

Massage Therapy
This 560-hour course is divided into three semesters and is designed to prepare students for both state and national massage therapy licensing exams through class work and practical hands-on training. Students will obtain a foundation for practice as an entry level Massage Therapist. Upon successful completion of the three-semester course, the student will be eligible to sit for the national exam and apply for state licensure in North Carolina.

Pre-requisites:
• High school diploma/GED
• 18 years of age
• No felony convictions

Massage Therapy – Semester I is offered beginning each fall semester. Modules include: fundamentals of Swedish massage, anatomy and physiology, kinesiology, ethics, NC laws and rules, communication, hygiene, standard precautions, special populations, wellness & self care, and student clinic.

Massage Therapy – Semester II is offered beginning each spring semester. Modules include: sports massage, anatomy and physiology, pathology, prenatal massage, oriental bodywork, hydrotherapy, joint mobility, functional assessment, student clinic, field work and CPR.

Massage Therapy – Semester III is offered beginning each summer semester. Modules include: deep tissue massage, somatic psychology, tai chi body mechanics, business, fieldwork and student clinics.

Note: Massage Therapy Semesters I, II, and III are sequenced courses. Students are admitted into the Massage Therapy Course fall semester only.

Medical Terminology
This 30-hour course is an introduction to the study of the structure of medical words and terms. Emphasis is placed upon spelling and defining commonly used prefixes, suffixes, root words, and their combining forms. Program content covers
basic human anatomy and physiology, elements of medical terminology and names of major diseases, including terms used in physical exams, operative procedures and diagnosis. Students will receive a certificate upon successful completion of this course, may advance to the Medical Transcription course if desired.

**Medical Transcription**

This 45-hour course offers a foundation in medical transcription. It enhances students’ knowledge of medical terminology, human anatomy and physiology, as well as English language skills. Students will become proficient in typing a variety of medical reports and become familiar with transcribing equipment. Upon successfully completing of the course, the student will receive a certificate. Prerequisites: Proficient in keyboarding, knowledge of medical terminology, and ability to operate available transcribing equipment.

**Medical Billing and Coding**

This course is designed to satisfy the training hours and competencies required for national certification while exploring ICD-9 and CPT 4. Students will cover topics related to both the physicians’ office and hospital coding. Course topics for physicians’ office coding includes introduction to CPT, evaluation/management services, anesthesia/surgery, radiology and pathology/laboratory, medicine, ICD-9CM introduction, ICD-9CM guidelines and third-party reimbursements and manage care. Course topics for hospital coding includes surgery coding, outpatient coding, procedure coding, diagnosis coding, anatomy and UB-92 claim forms. Prerequisite: Medical Terminology.

**Nurse Aide Level I**

This 132 hour course prepares students to provide personal care and perform basic nursing skills for the elderly and other adults. Emphasis is placed upon the aging process. Issues that are addressed include safety, restorative care, personal and functional diseases/disorders, communication, patient’s rights, nutrition management and elimination. The course requires students to successfully complete classroom and laboratory skills before proceeding to the clinical setting. Upon successful completion of the class/lab and clinical experience, students are required to take a written competency and skills exam. Once students satisfactorily complete the course, they are eligible to apply for listing as a Nurse Aide I with the Nurse Aide Registry through the NC Division of Facility Services.

**Nurse Aide Level II**

This 160-hour course prepares students to perform more complex skills for patients or residents regardless of the setting. Emphasis is on infection control, oropharyngeal suctioning, established tracheostomy care, observation and maintenance of oxygen therapy, enteral nutrition for existing infusions, and Nursing Assistant II roles with members of a health care team. A skills/competency evaluation is required for documenting student competency. This course includes 80 hours of class/laboratory, and 80 hours of clinical learning experience. Once students success-
fully complete the course and skills competency evaluation, they are eligible to apply for listing as a Nurse Aide II through the North Carolina Board of Nursing. Prerequisites: Must show proof of completion of a minimum 75-hour, state approved Nurse Aide I course and must have a high school diploma or GED.

**Nurse Aide Refresher**
This 16-hour course provides an opportunity for nursing assistants to update their knowledge of personal care and basic nursing skills needed for elderly patients. This course also allows individuals with an expired Nurse Aide I listing to re-list with the Division of Facility Services. Upon successful completion of a written examination and a skills/competency evaluation, students are eligible to re-apply for listing with the Nurse Aide Registry through the NC Division of Facility Services. Prerequisites: Must provide proof of completion of a minimum 75-hour, state approved Nurse Aide I course.

**Tanning Operator Training**
Effective January 1, 1993, the Division of Radiation Protection in Raleigh requires any person operating a tanning bed in North Carolina be at least 18 years of age and be certified. This 13-hour course is designed to instruct the student on the proper and safe way to operate a tanning bed.

**School Health Assistant**
This 48-hour course, will qualify students to work as a School Health Assistant in conjunction with the Registered nurse in public schools. Topics include: the role of the School Health Assistant, scope of practice/ethics, documentation, communication, organization, health and safety (CPR/First Aid, Bloodborne Pathogens and Hepatitis), common childhood illnesses, chronic diseases, medications, screenings and medical procedures. This course may be used toward receiving the Teacher Assistant Institute Certificate. Prerequisites: GED, high school diploma, and 18 years of age.

**Vocational and Technical Services**

**Mechanical Engineering** courses provide training in architectural drafting, technical drafting, furniture drafting/design and AutoCAD. These courses are designed in various ways to provide beginning and advanced students the skills required to become valuable employees in each of the fields. Class work as well as computer work is stressed as conditions dictate.

**Aviation Technology** courses provide two types of training for the prospective and advanced pilot. Ground schools are offered for the private pilot certification and pilot’s instrument rating.

**Automotive Technology** courses cover all aspects of automotive repair and prepare the individual for specific automotive certifications. Special classes may be initiated at the request of any automotive dealership or repair shop.
Autobody Repair courses are designed for the individual who wishes to learn or sharpen skills. These classes are taught parallel to curriculum classes, providing students the opportunity to deal with major paint manufacturers as well as frequent attendance in special seminars taught by manufacturer specialists.

Welding Technology courses are designed to provide the beginner and professional the opportunity to gain or develop skills. MIG, TIG, stick, pipe, and basic welding offer the beginner or professional the opportunity to develop skills that may qualify them for promotion or certification.

Electrical/Electronics classes have been used extensively by industry to provide specific training in areas of communication, PLC’s, metering, AC/DC theory, digital electronics, motors, motor controls, HVAC controls, etc. This area provides students with training in areas that will qualify them for electronic troubleshooting, development, and programming.

Furniture Technology courses provide training in areas such as upholstery from spring-up to detailed, cutting, sewing and CNC programming for routers and finishes. Customized training may be offered on-site where training in specific procedures or methods is required.

NC Manufacturing Certification Program enhances career opportunities in manufacturing fields using a curriculum based upon industry standards and competency testing. Current and potential manufacturing workers can achieve certification at two levels. Level I certification can be gained by completing the manufacturing fundamentals program. This program is 96 hours in length, covering four core courses and two electives. Level II certification involves industry-specific programs.

Building Trades courses are taught using a nationally recognized certification program entitled “Wheels of Learning,” encompassing 5 disciplines. A student who has completed any “module” in any area will be tested to determine competency and will be certified as such. This is a competency-based program, allowing students to work at their own pace. Areas of study include carpentry, masonry, plumbing, electrical, and HVAC. The program is effectively utilized by companies for apprenticeship certification in all areas.

Prep. for Contractor’s License is a 60-hour course that prepares students to sit for the NC Contractor’s Licensing examination.

Building Codes for residential construction courses are offered to the individual, either experienced or new to the trade, who wants to update or improve knowledge of residential codes.
Apprenticeship Training provides the formal course work for skilled trade employees at local industries to be enrolled in the NC Apprentice Program. Combined with on-the-job training, individuals upon completion of the program will be awarded a certificate and registered as a journeyman in the particular skill craft area.

Plumbing Contractor Test Prep is a 36 hour course that prepares students to sit for the NC Plumbing Contractor’s Exam.

Small Business Center

“The First Step to Your Business Success”

The Small Business Center is designed to meet the training needs of the area’s small business owners, managers, and other personnel, as well as entrepreneurs planning to start a small business. Training sessions are offered as workshops, seminars, and short-term courses. The Small Business Center also offers confidential business counseling at no charge and has a resource center with publications and other research materials to help with small business research and problem solving.

General Interest

Basic Rider Safety Program
This course is designed for the student with little or no motorcycle riding experience. Upon successful completion of this 22-hour safety and street skills course, students will be given completion cards to take to their local DMV office. Upon successful completion of the written examination, students will receive a motorcycle endorsement on their driver’s license. Motorcycles are provided by the college, however the student is responsible for the protective gear required to participate in this course. Classes are held March-November each year.

Experienced Motorcycle Safety Course
Offered on demand, this 8-hour course is designed for students who would like to sharpen their current riding safety skills. Students are required to bring their own motorcycle and protective riding gear.

Defensive Driving Course
Those charged with certain traffic violations, such as speeding, unsafe movement, etc., in any county that recognizes the NC Safety and Health Council program may have their charges reduced by the District Attorney by taking this 4-hour course. Violations will be reduced to improper equipment and points will not appear on your driver’s license or your insurance. The course is offered weekly. Call 828.726.2242 in Caldwell County or 828.263.5370 in Watauga County for registration information and eligibility requirements.
General Information

The Corporate and Continuing Education Department provides full services to both Caldwell and Watauga counties. The department has facilities at CCC&TI’s Caldwell Campus, the J.E. Broyhill Civic Center and at the Watauga Continuing Education Center. The Small Business Center has offices on the Caldwell Campus of CCC&TI as well as at the Watauga Continuing Education Center in Boone.

Admissions
Admission to classes is open to individuals 18 years of age or individuals whose regular high school class has graduated. Persons between 16 and 18 years old may enroll if they have written permission from the school where they last attended.

Fees
Tuition will depend upon the nature and purpose of each course/workshop. Textbooks or special materials may be purchased from the campus bookstore. Occupational training courses are free to NC residents 65 and older. In self-support classes and workshops, special fees may be charged.

To Enroll
Courses last an average of six to sixteen weeks; however, classes may be offered on a short-term basis. Registration dates may be found in the front of the college catalog under Academic Calendar and are listed below. Semester schedules are also published and distributed. The college reserves the right to cancel any course when an insufficient number of people register. Applicants are admitted on a first come, first served basis; persons may also register any Tuesday from 8 am - 7pm at the Continuing Education office on both campuses and first class session if space is available.

Continuing Education registration dates are:
- Fall (Watauga) August 12
- Fall (Caldwell) August 10
- Spring (Caldwell) January 4
- Spring (Watauga) January 5
- Summer (Watauga) May 17
- Summer (Caldwell) May 18

Parking stickers and student IDs are available on regular registration days.

The college will be closed on the following holidays in the 2004-2006 academic year:
- Labor Day September 6
- Thanksgiving November 23-25
- Christmas December 23-31
- New Year’s Holiday January 1

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Refund Policy
Students registered for an occupational training course who officially withdraw prior to the first day of class will be eligible for a 100 percent refund, if requested. Students who officially withdraw on the first day of class or by the 10 percent date of the class will be eligible for a 75 percent refund, if requested. (Students enrolled in a multi-entry/multi-exit class who officially withdraw on the first day of class or within 10 calendar days of the first class meeting are eligible for a 75 percent refund, if requested). Students registered for an occupational training course that is canceled for any reason by the vice-president will automatically be issued a 100 percent refund. To receive a refund, a student must complete and sign a continuing education drop form and have the vice-president sign for the class(es) being dropped.

Course Repetition Policy

Occupational Extension
No occupational extension training course may be taken more than twice within a five-year period unless the student pays full cost of the course. The occupational extension repeat policy does not apply to students taking classes for certification, licensure, or recertification.

Attendance/Grading System and a Course Syllabus
The instructor will issue attendance policies at the beginning of each course. Students will be held responsible for understanding all attendance and classroom rules issued by the instructor. Numerical and/or letter grades will be given for occupational training classes requiring certification. All other continuing education grades will be recorded as follows:

<table>
<thead>
<tr>
<th>Grade</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Excellent</td>
</tr>
<tr>
<td>B</td>
<td>Above Average</td>
</tr>
<tr>
<td>C</td>
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<td>D</td>
<td>Below Average</td>
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<tr>
<td>F</td>
<td>Failing</td>
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<td>S</td>
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<tr>
<td>U</td>
<td>Unsatisfactory</td>
</tr>
<tr>
<td>W</td>
<td>Withdrawn</td>
</tr>
</tbody>
</table>

Student Records/Transcripts
Student records and transcripts can be reviewed by students for accuracy and may be picked up in person by presenting a signed request in the Corporate and Continuing Education office. Certificates are given for the satisfactory completion
of occupational training courses. CCC&TI adheres to the Family Privacy Rights Act and assures all students that their records will remain confidential. The college has the right to release information which may include the following:

- student's name
- date of birth
- address
- telephone number
- dates of attendance

Rules and Regulations
All the rules and regulations of the college under "Student Conduct and Responsibilities" will be adhered to by Corporate and Continuing Education students.

J.E. Broyhill Civic Center

The J.E. Broyhill Civic Center of CCC&TI is located in Lenoir, NC, two miles north of the Caldwell campus in Hudson on US 321. The Broyhill Center features a 1000 seat state-of-the-art proscenium performance theatre and up to eight meeting rooms with banquet seating for up to 300.

Scheduling and use of the Broyhill Civic Center is on a first come, first served basis. Scheduling must be done by contacting either the Civic Center Director or the Program Assistant. Use of the Corporate Computer Training Center is scheduled through the Corporate and Continuing Education office. College events are permitted to use the facility free of rental charge, however there may be charges for any event where food is present for such items as cleaning, linens and any real cost incurred by the civic center for the event.

The Broyhill Civic Center offers discount tickets to all employees and students of CCC&TI. Discounts are based on events and availability. We may not be able to offer discounts to events that are not produced by J.E. Broyhill Civic Center or CCC&TI.
Basic Skills

In an effort to meet the needs of adults who do not have a high school credential, plus the numbers of unemployed and underemployed, the Basic Skills Department offers approximately 60 classes in over 20 locations each semester. These classes serve students wishing to improve their reading or math, earn a GED or Adult High School Diploma, learn to speak English, learn basic computer skills, improve life skills, secure a job, or learn a specific academic skill for their job. Basic Skills classes are tuition free.

Literacy

**ABE** – Adult Basic Education classes are offered for people who may need help learning basic speaking, reading, and writing skills. Instruction is also provided in math, science, and social studies. Classes are offered free of charge, including all books and materials which have been especially prepared for adult learners. Persons can study at their own pace with instructors available to assist them in this pre-high school program. Volunteer tutors are also available to assist as needed.

**ESL** – English as a Second Language students comprise one of the fastest growing groups served in Basic Skills. These classes are designed for non-native students who need to learn to speak, read, or write English. Classes are held in the community, Basic Skills Centers and in the workplace. Special curricula and instructional techniques are used to meet the needs of this population.

**Workplace** – A number of classes are held in local business and industry each semester using a variety of formats. Reading and Math Improvement classes meet during the workday to assist students with low reading and math skills. There are
after work classes for regular ABE/GED, where employees improve skills or earn credentials. Others offer job related or job specific curricula integrating workplace skills with basic skills instruction. Often industry purchases books, pays testing fees, and provides paid time-off for employees who attend classes. At the request of industry, short skill courses can be offered. These are closed ended and involve the teaching of a particular skill such as writing and/or responding to a memo.

**Family Literacy** – Local elementary schools and the Family Resource Center house "Study Clubs" that meet daily to work with families. Adults in need of basic skills instruction may bring their children to class. These classes provide comprehensive and intensive services to families. Components of the program include Adult Basic Education/GED, Parent Education, Parent/Child Together Time and Early Childhood Education. Classes are free.

**GED or General Educational Development** – This program is designed to give adults who have less than a twelfth-grade education an opportunity to earn a high school equivalency certificate. Classes are offered on the Caldwell and Watauga campuses, and throughout the community. Individualized instruction is provided in an adult-centered atmosphere. Students can also work online to do some preparatory work for the GED. To complete the GED, passing scores are required on five tests: language arts: reading, science, math, social studies, and language arts: writing. Persons wanting to earn a GED may enroll and complete the program at any time during the semester. Registration is free. Orientation and placement testing are offered every Thursday.

**Compensatory Education** is a community college program designed for adults with mental retardation or traumatic brain injury. Its goals are to help the individual acquire basic skills and abilities needed to become more independent and self directed and to meet and manage community, social, work, and personal adult responsibilities. Classes are free and meet in sheltered workshops, group homes, community sites and campus classes.

**Adult High School Diploma**

**Program Description**
The Adult High School Program is for anyone who wants to complete his/her high school education and earn a diploma. The AHS classes are offered at Caldwell Community College and Technical Institute in Hudson and Boone. Classes are free and textbooks are provided free of charge for use in the classroom.

Students may choose to enroll in morning or evening classes, or both. Core subject classes meet twice a week for three hours and elective classes meet once a week for three hours. Classes are structured for students to earn one unit of credit for each class completed. Most classes can be completed in eight weeks.
Graduation Requirements
A total of 20 units must be completed for graduation. Applicants may receive transfer credits for courses previously completed in public, private, or home school. If there are no credits to transfer, a student may earn all 20 units with the AHS program. The Adult High School graduation requirements are:

- A minimum score of 9.0 on the Reading, Language Skills, and Math Placement tests.
- Passing scores on the NC Competency Test
- English 4 units
- Mathematics 3 units (to include Algebra I)
- Science 3 units (to include Biology and Physical Science)
- Social Studies 3 units (to include Government/Economics, US History, and a World Studies)
- Health or PE 1 unit
- Electives 6 units

20 units (including passing scores on the NC Competency Tests)

Enrollment Procedure
The first step in the enrollment process is to attend orientation and placement testing. Orientation sessions are offered Thursdays at 9 a.m. and 5:30 p.m. at the Basic Skills Center in Hudson and at 9 a.m. and 5 p.m. at the Watuaga Basic Skills Center in Boone (Minor applicants, 18 years old and under, must bring the Minor Permission Form). A score of 9.0 or above is required to be eligible for AHS class registration. Review classes are available for those who would like to retest. Applicants should also have an official transcript sent from their last high school.

New Student Registration
The New Student Registration takes place every eight weeks. Attendance at Adult High School registration is a requirement for enrollment. Applicants will be assigned a date to attend the registration session after completing orientation and placement testing. At registration, the applicant will receive important information about the program and will register for classes.

Human Resources Development Program
Since 1973, Human Resources Development (HRD) has been offering a variety of courses to educate and train adults for workplace success. These courses vary from Computers in the World of Work: Introduction to Basic Computer Skills to How to be a Successful Truck Driver to Communication Skills in the Workplace to The Pre-job Program.
HRD courses are available to individuals who are unemployed, underemployed, seeking to make a job change, or seeking to gain basic job maintenance skills. All classes are FREE to those who qualify. Others may also take the class but must pay a registration fee.

To see if you qualify to take a class for free, or if you need additional information, please call Donna Bean at (828) 726-2383, Mandy Williams at (828) 726-2274, Greta Triplett at (828) 726-2275, or Melinda Hefner at (828) 726-2245.

Among the variety of classes offered by the Human Resources Development Program are:

1. **The Pre-Job Program**
   Pre-Job is a 5-week long training program designed to help people get and keep jobs. The program helps unemployed individuals who may be having a hard time getting a job or who don’t know what kinds of jobs they are suitable for. Pre-Job also helps people who want to make a career change. Free job placement assistance is available, and the training is FREE to any unemployed person and others who may qualify.

   Students who need to work toward a GED or who need to brush up on basic reading and math can attend an optional GED class in the afternoons.

2. **Computers in the World of Work: Introduction to Basic Computer Skills**
   Computers in the World of Work: An Introduction to Basic Computer Skills is a course for those individuals who have minimal or no computer skills.

   The class has four major objectives:
   - To teach basic computer skills to adults who have a desire to learn in order to increase their employability skills;
   - To emphasize the role of information technology in the world of work;
   - To generate enthusiasm for computer technology;
   - To create a desire to obtain additional information and skills in computers.

   Classes are small and students have plenty of hands-on computer experience with lots of individual attention from the instructor.

   The course is FREE to those who qualify. Others may also take the class but pay a registration fee. To see if you qualify to take the class for free of if you need additional information, please call Donna Bean at (828) 726-2275, or Melinda Hefner at (828) 726-2245.
3. **Job Readiness Workshops**

Job Readiness Workshops are 3- to 4-hour workshops designed for individuals who have recently been laid off or who are seeking employment through the Employment Security Commission. The purpose of the workshop is to help prepare individuals for re-entry into the job market.

For more information, please contact Greta Triplett at (828) 726-2275.

4. **Other HRD classes**

Other classes that are offered include, but are not limited to:

- Career Planning and Assessment
- Employability Skills
- Getting and Keeping a Job
- HRD-Keyboarding
- Introduction to Customer Service and Telephone Skills
- Introduction to Office Technology
- Using the Internet in Your Job Search
- Using Word and Excel in Your Job Search
CCC&TI Full Time Personnel

Alexander, Anna  
Instructor, Accounting  
B.S., University of North Carolina at Chapel Hill  
M.B.A., Appalachian State University, CPA and CMA

Allen, Brandy  
Administrative Assistant, Corporate & Continuing Education–Caldwell  
A.A.S., Caldwell Community College & Technical Institute; additional studies, CCC&TI

Allen, Darius  
Technician, Civic Center Production Assistant

Andrea Anderson  
Instructor, Early Childhood–Watauga  
B.S., Appalachian State University; additional studies, Western Carolina University

Annas, Camille  
Instructor, Academic Support Center  
A.A., Caldwell Community College and Technical Institute; B.A., Lenoir-Rhyne College; M.A., Appalachian State University

Annas, Rosanne  
Director, Radiography Program; Instructor  
R.T.R., Charlotte Memorial Hospital; Certified Tanning Facility Operator

Aultman, Shelda C.  
Department Chair, Business; Instructor  
A.A.S., Western Piedmont Community College; B.S., M.A., Appalachian State University; Ed. D., North Carolina State University

Bailey, Jan  
Librarian- Watauga Campus  
B.A., Lincoln Memorial University; M.A., State University of West Georgia; M.L.S., Florida State University

Ballew, Belinda  
Counselor, Educational Talent Search/Student Support Services  
A.A., Lord Fairfax Community College; B.S., M.S., Ed.S., James Madison University

Barber, Mark  
Director, Human Resources  
A.A.S., Community College of the Air Force; B.S., University of South Carolina at Coastal Carolina; M.A., Webster University; additional studies, Appalachian State University

Barefoot, Diane  
Instructor, History  
B.S., Appalachian State University; M.S., Appalachian State University
Barlowe, Gloria  
**Technician, Computer Information Services**  
A.A.S., Caldwell Community College and Technical Institute

Barrier, Teddie  
**Instructor, Information Systems**  
A.A.S., Catawba Valley Community College, B.S., Gardner Webb, M.A., Appalachian State University

Bean, Donna  
**Department Chair, Corporate and Continuing Education; Director, Small Business Center**  
A.A.S., Caldwell Community College and Technical Institute; B.S., Gardner-Webb College; M.S., Appalachian State University

Bentley, Jeff  
**Technical Director; Civic Center**  
A.A.S., Western Piedmont Community College

Bentley, Shelley  
**Technician, Computer Information Services**  
A.A.S., Caldwell Community College and Technical Institute

Biddix, Vale  
**Instructor, Developmental Studies**  
B.S., Appalachian State University; M.Ed., Appalachian State University; additional studies, Appalachian State University

Boggs, Leigh-Anne  
**Instructor, Physical Therapist Assistant**  
A.A., Southwestern Community College; B.A., Lenoir-Rhyne College

Boham, Kenneth A.  
**President**  
B.S., East Carolina University; M.Ed., North Carolina State University; Ed.D., North Carolina State University

Bolick, Ken  
**Instructor, Truck Driver Training**  
C.R.T., N.C. Apprentice Truck Mechanics

Sue Bolick  
**Technician, Accounting**  
A.A.S., Kings Business College; additional studies, Caldwell Community College and Technical Institute and Catawba Valley Community College

Bolt, Cheryl D.  
**Program Assistant, Civic Center**  
A.A.S., Caldwell Community College and Technical Institute; B.S., Gardner-Webb University

Boone, Rebecca  
**Assistant Director, Student Support Services**  
B.A., University of North Carolina Chapel Hill; M.A., Appalachian State University

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Bowers, Tony  
Housekeeper, Environmental Services

Bradshaw, Michael  
Coordinator, Mathematics; Instructor  
B.S., Appalachian State University; M.A., Appalachian State University; additional studies, University of North Carolina at Greensboro

Briggs, David S.  
Director, Civic Center  
B.A., Muskingum College; additional studies, Pittsburgh State University and University of North Carolina at Greensboro

Broach, Anita  
Director, College Foundation  
B.S., Appalachian State University; additional studies, Montreat College

Brookshire, Joan  
Library Technical Assistant

Brown, Bonnie  
Administrative Assistant, Watauga Campus  
A.A.S., Caldwell Community College and Technical Institute; additional studies, Caldwell Community College and Technical Institute

Brown, Cheryl  
Administrative Assistant, Continuing Ed. Center - Watauga  
B.M.E., Mars Hill College

Brownell, Gina  
Library Technical Assistant, Circulation  
B.A., University of New York

Bryant, Christina  
Secretary, Executive Vice President  
A.A., Caldwell Community College & Technical Institute

Buchanan, Margaret  
Instructor, Nursing  
A.D.N., St. Petersburg Jr. College; B.S.N., M.S.N., University of South Florida

Buff, Melissa  
Director, ESL  
B.A., B.S., Lenoir-Rhyne College

Burgess, Jr., Andrew J.  
Director, Basic Law Enforcement Training; Instructor  
B.A., M.A., Ed.S., Appalachian State University; additional studies, Fort Benning, Georgia; Fort Leavenworth, Kansas; and Fort Ben Harrison, Indiana
Calloway, Donna  
*Instructor, Cosmetology*  
Diploma, Macon University of Cosmetology; Teacher's Certificate, NC State Board of Cosmetic Art; additional studies, USC, Haywood CC, Blue Ridge CC, Carolina Salon Systems, CVCC

Canterbury, Robin Lane  
*Department Chair, Math and Natural Sciences; Instructor*  
B.S. and M.S., Appalachian State University; Ph.D., Clemson University

Castelloes, Frederico  
*Instructor, Spanish*  
A.A., Valencia Community College; B.A., Appalachian State University; M.A., Appalachian State University

Cauthen, Jean  
*Director, Visual Art; Instructor*  
M.F.A., James Madison University; B.F.A., East Carolina University; B.A., North Carolina State University

Chapman, Pam  
*Instructor, Nursing*  
Diploma in Nursing, Durham Technical Institute; A.A.S., Caldwell Community College & Technical Institute; B.S.N., Winston-Salem University; M.S.N., Gardner-Web University

Chester, Deanna  
*Instructor, Communications–Watauga*  
B.A., Pfeiffer College; M.A., University of North Carolina at Greensboro; additional studies, Richmond College

Christie, Marla  
*Public Information Officer*  
B.A., Mars Hill College; additional studies, UNC-Asheville

Church, Donna  
*Executive Assistant to the President*  
A.A.S., Caldwell Community College and Technical Institute, Professional Associate, PSP Certificate, NCAEOP; additional studies, Gardner-Webb University

Church, Kathy  
*Program Assistant, Basic Skills*  
A.A.S., Caldwell Community College and Technical Institute; NCAEOP, Professional Associate Certificate

Clark, Janice  
*Technician, Computer Information Services*  
A.A.S., Caldwell Community College and Technical Institute

Clement, Debra  
*Administrative Assistant, Corporate & Continuing Education*  
A.A.S., Caldwell Community College & Technical Institute

Clement, Rita  
*Library Media Technical Assistant, Processing*  
A.A.S., Caldwell Community College and Technical Institute
Cline, Dan  
**Administrator, Evening/Weekend**  
A.A., Wingate Jr. College; B.A., Lenoir-Rhyne College; M.A., Appalachian State University

Cloer, Kathy  
**Instructor, History**  
B.A., University of North Carolina at Chapel Hill; M.A., Appalachian State University; additional studies, University of Copenhagen

Coffey, Johnna  
**Director, Enrollment Management Services**  
B.A., University of North Carolina at Greensboro

Conn, Doris  
**Director, Career Services**  
B.S., University of Tennessee, Knoxville; M.Ed., Memphis State University

Connor, Matthew  
**Instructor, Basic Skills; Recruiter**  
A.A., Montreat College; B.A., Oral Roberts University; M.Div., Asbury Theological Seminary

Cook III, Aaron  
**Instructor, Biology**  
A.S., Western Piedmont Community College; B.S., Appalachian State University; M.A., Appalachian State University

Cooke, Marischa  
**Director, Learning Resource Center**  
A.B., Lenoir-Rhyne College; M.S.L.S., University of North Carolina; additional studies, Duke University

Cornell, Brenda  
**Secretary, Student Services-Watauga**  
A.A.S., Caldwell Community College and Technical Institute

Correll, Carroll B.  
**Instructor; Accounting/Business Administration, Watauga**  
B.S., Appalachian State University; M.A., Appalachian State University

Cortner, Amy  
**Instructor, English**  
B.S., East Tennessee State University; M.A., East Tennessee State University

Council, Jimmy  
**Director, Nuclear Medicine Program; Instructor & Director, CT/MRI Program**  
A.A.S., Caldwell Community College and Technical Institute

Crouch, Kay  
**Director, Music Program; Visiting Artist; Instructor**  
B.M.E., East Carolina University; M.A., Appalachian State University; additional studies, University of North Carolina at Greensboro
Crump, Tracy
Instructor, Early Childhood
B.S., M.S., Louisiana Tech University; Ed.S., McNeese State University

Dunham, Sandra
Systems Analyst, Programmer
A.A.S., Caldwell Community College and Technical Institute; additional studies, Caldwell Community College and Technical Institute

Davenport, Manifred
Director, Environmental Services

Edwards, Jacqueline
Cashier
Studies at Caldwell Community College and Technical Institute

Davis, Melissa
Instructor, Mathematics
B.S., Appalachian State University; M.A., Appalachian State University

Eisenhour, Kevin
Instructor, Nursing
Diploma in Nursing, Catawba Valley Community College; A.A.S., CCC&TI; B.S., Winston-Salem University; M.S., University of North Carolina at Charlotte

Dillard, John
Instructor, Sociology
A.A., Western Piedmont Community College; B.S. and M.A., Appalachian State University

Enamait, John
Instructor, Internet Technologies and E-Commerce
A.A.S., Caldwell Community College & Technical Institute; B.S., M.B.A, Gardner-Web University; additional studies, East Carolina University

Dula, Annette
Secretary, Testing Center
A.A.S., Caldwell Community College

Evert, Carolyn
Director, Institutional Effectiveness and Research
A.A.S., Caldwell Community College and Technical Institute; B.A., Lenoir-Rhyne College; M.L.I.S., University of North Carolina at Greensboro

Duncan, Ira
Web Developer/Corporate Information Services/Network Specialist
A.A.S., Caldwell Community College and Technical Institute;

Firth, Steven
Assistant Director; Facility Services - Watauga
B.A., Appalachian State University; additional studies, Sandhills Community College
<table>
<thead>
<tr>
<th>Name</th>
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<tr>
<td>Fisher, Jennifer Lea</td>
<td>Instructor, Mathematics</td>
<td>B.A., UNC-Asheville; M.A., Wake Forest University</td>
</tr>
<tr>
<td>Fleckenstein, Tom</td>
<td>Instructor, Business Administration/E-Commerce—Watauga</td>
<td>B.A., University of North Carolina at Charlotte; B.S. UNC at Chapel Hill</td>
</tr>
<tr>
<td>Fox, C. Rudy</td>
<td>Director, Truck Driver Training Program</td>
<td>V.C.D., Nashville Auto Diesel College</td>
</tr>
<tr>
<td>Freeman, David</td>
<td>Instructor, Psychology</td>
<td>B.S., Appalachian State University; M.A., Appalachian State University, Ed.S., Appalachian State University</td>
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<tr>
<td>Freeman, Jacquelyn</td>
<td>Instructor, Sociology</td>
<td>B.S., Appalachian State University; M.A., Appalachian State University, Ed.S., Appalachian State University</td>
</tr>
<tr>
<td>Fulbright, Mitzi</td>
<td>Specialist/Counselor, Educational Talent Search</td>
<td>B.S., M.A., and Ed.S., Appalachian State University</td>
</tr>
<tr>
<td>Fulbright, Vera</td>
<td>Housekeeper, Environmental Services</td>
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<tr>
<td>Gragg, Kathy</td>
<td>Systems Administrator</td>
<td>A.A.S., Caldwell Community College and Technical Institute; additional studies, Caldwell Community College and Technical Institute</td>
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<tr>
<td>Grant, Timothy Ray</td>
<td>Groundskeeper Assistant</td>
<td></td>
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<tr>
<td>Green, Dustin</td>
<td>Instructor, English</td>
<td>A.A., Cleveland Community College; B.A., Appalachian State University</td>
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<td>Greer, Darlene</td>
<td>Accounting Technician - Watauga</td>
<td>A.A.S., Caldwell Community College and Technical Institute</td>
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<tr>
<td>Greer, Patty</td>
<td>Administrative Assistant, Marketing and Communications</td>
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Haas, Jennifer  
**Technician, Academic Support Center**  
A.A.S., Caldwell Community College and Technical Institute

Haigler, Bryan  
**Assistant, Maintenance**

Haigler, Dale  
**Courier**  
A.A.S., Caldwell Community College and Technical Institute

Haigler, Dale  
**Technical, Biology Lab–Watauga**  
B.S. and additional studies, Appalachian State University

Hampson, Margaret  
**Department Chair, English, Reading and Communications; Coordinator, Reading Program; Instructor**  
B.A., M.A., University of North Carolina–Chapel Hill

Hatley, Nancy  
**Academic Specialist, Student Support Services**  
A.B., University of North Carolina at Chapel Hill; M.A.T., University of North Carolina at Chapel Hill

Harris, Barbara  
**Director, Ophthalmic Medical Assistant; Instructor**  
M.B.A., Wake Forest University; P.A., Bowman Gray School of Medicine; M.A., Wake Forest University

Harris, Chris  
**Instructor, English**  
B.A., Appalachian State University; M.A., Ph.D. Florida State University; additional studies, Istituto di Lingua Italiana Ars Grammatica

Harrison, Jane  
**Instructor, Art**  
B.S., University of North Carolina at Greensboro; M.F.A, East Carolina University; additional studies, ECU, Wake Forest University, Penland School of Crafts

Harrington, Dale  
**Technician, Biology**  
B.S. and additional studies, Appalachian State University

Hartley, Regina  
**Instructor, Information Systems–Watauga**  
A.A.S., Coastal Carolina Community College; B.T. and M.A., Appalachian State University; Ph.D., Oregon University

Hearron, Thomas  
**Instructor, English**  
B.A., Rice University; Ph. D., State University of NY at Buffalo

Hefner, Melinda  
**Director, Human Resource Development/Retention**  
B.A., Appalachian State University
<table>
<thead>
<tr>
<th>Name</th>
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<tbody>
<tr>
<td>Helton, Wanda</td>
<td>Housekeeper, Environmental Services</td>
<td></td>
</tr>
<tr>
<td>Henderson, Dianne</td>
<td>Director, Financial Aid</td>
<td>A.A.S., Caldwell Community College and Technical Institute; B.S., Appalachian State University</td>
</tr>
<tr>
<td>Henderson, Thomas</td>
<td>Instructor, Auto Body</td>
<td>B.A., University of North Carolina at Charlotte; B.S., Appalachian State University; M.S., Appalachian State University</td>
</tr>
<tr>
<td>Henley, Carolanne</td>
<td>Instructor, Nursing</td>
<td>B.S., Oklahoma Methodist University, B.S.N., Oklahoma Baptist University, M.S.N. East Tennessee University</td>
</tr>
<tr>
<td>Henson, Lavola</td>
<td>Housekeeper, Environmental Services</td>
<td></td>
</tr>
<tr>
<td>Herold, Ruth</td>
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<td>Housekeeper, Environmental Services</td>
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<td>Rogers, Scott</td>
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